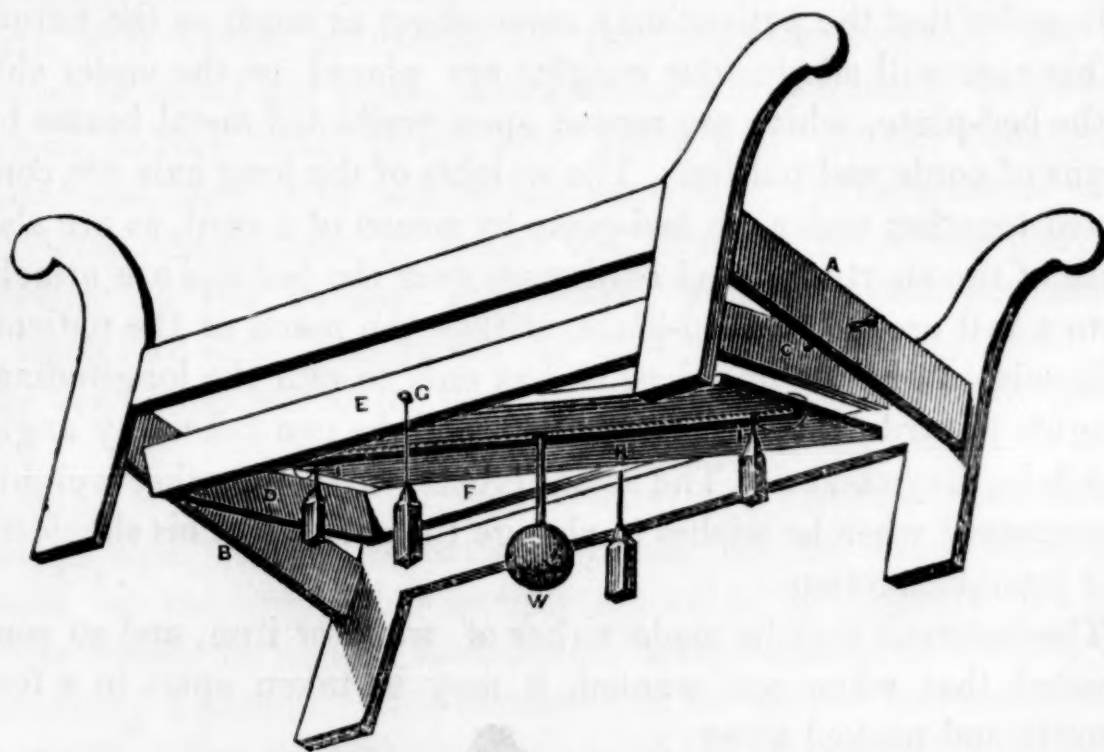


THE  
MEDICAL EXAMINER,  
AND  
RECORD OF MEDICAL SCIENCE.

NEW SERIES.—NO. LIV.—JUNE, 1849.

ORIGINAL COMMUNICATIONS.

*Description of a Bedstead for the Treatment of Fractures of the Lower Extremities on board ship.* BY W. F. JACKSON, M. D., Brunswick, Maine. (Communicated in a letter to Professor Mütter.)



Dear Sir,—In accordance with your request, I send you a description of the “Fracture Bedstead,” the model of which I recently exhibited to you; and the same excuse which I then offered

for presenting so rough a model, must answer for the no less rough description. I need say nothing of the design of the bedstead, nor of its applicability to its object, for you are already acquainted with the former, and are, of course, a far better judge of the latter than myself.

This apparatus consists of a common bedstead, or one modified to suit the taste of the individual. Through the centre of the cross rails A B, pass two centres which are screwed into the rails, and which support the frame C, D, E, F, at the joints C, D. By this means, the frame is allowed to play freely upon its longitudinal axis, and thereby avoid the *rolling* motion of the ship, provided that the bedstead is placed "fore and aft." Within this frame is placed the bed-plate, which is supported by means of centres at the points G, H. The bed-plate will therefore counteract the *pitching* of the ship. If the bedstead be placed "athwart ship," the actions of these planes will of course be reversed.

In order to make the bed-plate maintain its horizontal position, a heavy weight W, is attached firmly to its centre, on the under side, by an iron rod, and this rod must be as long as the height of the bed-plate will allow, so as to get as great a leverage as possible.

In order that the patient may move about as much as the nature of his case will admit, four weights are placed on the under side of the bed-plate, which are moved upon graduated metal beams by means of cords and pulleys. The weights of the long axis are connected together under the bed-plate by means of a cord, as are also those of the short axis, and cords pass over the bed and are attached to a rail around the bed-plate, within the reach of the patient. If he wishes to draw up a leg, he has only to pull the longitudinal weights towards the foot of the bed, and he can take any angle which he may choose. The same process with the other weights is necessary when he wishes to change the position of his shoulders in a lateral direction.

The bedstead may be made either of wood or iron, and so constructed that when not wanted, it may be taken apart in a few minutes and packed away.

I have also another model in process of construction, which is somewhat simpler than the one which I exhibited to you, but it requires a little more room. In this case, the patient himself be-



comes the centre weight, by having the centres of the frame c, d, e, f, placed above him. I think that I might make an improvement in the bedstead, but you are well aware that a student finds but little time for matters not directly connected with his studies, and I must defer it for the present.

Yours respectfully,

W. F. JACKSON.

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*Remarkable Case of Hysteria occurring in the service of M. GUENAU DE MUSSY. Hotel Dieu, Paris. Reported by J. H. WEIR, M. D., Philadelphia.*

*Courteville*, female, twenty-one years of age, of medium height, and of apparently good constitution. The catamenial discharge had been early developed, and up to the age of eighteen years she had never suffered from bad health. At that time, while engaged in washing the windows, she was seized with vertigo, (for which she could not account,) which caused her to fall from the third story of the house to the ground. This fall, according to the patient's statement, produced a fracture about the centre of the occipital bone. She remained insensible for fifteen days. Eight days after having recovered her faculties, she suddenly lost the senses of smell and sight, accompanied with a general trembling, which, having lasted for an hour and a half, left her completely paralysed, both as to motion and sensibility. The sense of taste likewise disappeared, or rather was so much perverted, that, according to the patient, every thing she put into her mouth seemed like dirt. The power of mastication was preserved, but the senses of smell, as well as the other senses, were finally lost. The patient remained in this state for three or four months, when the sight and smell returned. At this time she was seized with mental alienation, which, like the other accidents, came on suddenly, with complete loss of intelligence, the only ideas which the patient manifested, being confined to the desire of becoming a mother. This condition of the patient continued about a month, when the right leg recovered almost completely its movements and some little sensibility. The arm of the same side experienced an inverse amelioration, the sensibility being much more apparent than the movement. At the same time the right side of

the face became sensible and the senses of taste and smell returned.

Two months after this, the patient while lying in bed, was seized with a violent vertigo, followed by a renewal of the complete paralysis of the right leg. After a short time, she recovered the movement of the left leg, and subsequently was enabled to move more perfectly the right one. It was not till four months after this happy change, that she began to walk about. The left arm executed some few movements but remained insensible, as did the whole of the corresponding side of the body. This improvement lasted upwards of a month, when suddenly the right arm and leg were seized, first with contraction, and finally with entire paralysis, which lasted about four months. At the same time her madness returned, lasted four months, when all these bad symptoms disappeared, and the girl was able to return home during the winter of 1839. She then enjoyed perfect health for some months, when she again lost her intellectual faculties. By the patient, this relapse was attributed to agitation resulting from an attempt made to violate her person. Her prominent idea consisted in a desire to commit suicide. She was taken to Salpetriere, which she left during the carnival of 1840, entirely cured. Entering the convent of St. Michel, she found herself so well at the end of eight months, that she again undertook the duties of a domestic. In this situation she remained for two months, when, after a slight dispute, she was attacked with severe vertigo, followed by loss of the use of the right extremities. In this state she entered the Hotel Dieu, January 1st, 1841, when the following symptoms presented themselves :—Decubitus dorsalis, respiration frequent and difficult, great anxiety of countenance. Divergent strabismus of the right eye, of the cause of which the patient is entirely ignorant. The left buccal commissure is drawn outwards, while the right has lost all power of motion. Being questioned as to the seat of pain, the patient answers with difficulty, and indicates with the left hand the præcordial region and head. Neither the ear nor the stethoscope reveal anything abnormal in the sounds of the heart, except that the pulsations are frequent and precipitate. As to the pain in the head, the patient shows the place where she asserts to have received the fracture three years ago. The pain in the præcordial region is increased upon pressure. The patient vomits everything



taken into the stomach, even the Seltzer water. She appears to retain her intelligence. The whole of the right side of the body is deprived both of movement and of sensibility, and the sides of the face participate in this double paralysis, after the following manner: *on the left*, no sensibility; *on the right*, complete loss of motion. The bowels are free, there is no heat of skin, and, notwithstanding the incessant vomiting, the desire for food is not wanting. Ordered the application of two cauteries at the back of the neck—leeches over the præcordial region—diet simple.

*Jan. 2d.* The patient remains in the same state. The pain in the præcordial region is rather augmented, yet the most careful examination reveals nothing as to its cause. Some pain in the left arm, cold sweat on the face. No involuntary movements of the left side.

*January 3d.* No change in the condition of the patient. The leeching over the præcordial region was repeated. Pills of valerian were ordered, in conjunction with the warm bath, and an enema, containing four grains of assafœtida. In the evening of this day, there was a wonderful change for the better. There was a diminution of the pain in the præcordial region; a return of the sensibility of the right side, with some power of motion in the right arm. The patient answers, without much difficulty, the questions addressed to her.

This change for the better lasted two days, when, on the evening of January 5th, the resident physician, in making his visit to the ward, found the patient completely unconscious, without giving the slightest signs of life; the eyes thrown up and sensibility entirely abolished.

*Jan. 6th.* This morning the patient remains in the same state. She opens her mouth from time to time, to vomit a few mouthfuls of bile; bowels costive; ordered pills composed of valerian, castor and assafœtida; purgative enema; diet.

*Jan. 7th.* This morning the patient is gay and lively; answers all questions, and is able to move both upper and lower extremities; appetite good; pulse natural; vomiting still continues, and the patient complains very much of the cauteries. The patient continued to get better up to January 16th.

*Jan. 16th.* The patient still complains of the cauteries. The

catamenia have appeared, after having been preceded by pains in the lumbar and pelvic regions.

*Jan. 17th.* The patient seems to be perfectly well. The catamenial flow, which were very abundant during the night, have much diminished. This evening at 8 o'clock, she was found by M. Guenau de Mussy in her bed, confined in the straight jacket. In her violent movements she succeeded twice in taking it off, and he had great difficulty in re-applying it, although assisted by the nurse, matron and one of the servants. The patient would at one time scream with the utmost violence, and then sink into a state of stupor, pronouncing now and then some incoherent words, with a convulsive trembling of the lips, like one intoxicated. The pulse was frequent and agitated, and the body was covered over with an abundant sweat. The catamenia were entirely suppressed. Ordered twenty leeches to the vulva.

*Jan. 18th.* Same agitation continues, with anxiety of countenance, and involuntary movements of the body. Respiration frequent; the pain in the præcordial region has returned; delirium constant, during which the patient is continually asking for her white horse to go into the country. Sensibility lost, or nearly so, over the whole body. Ordered venesection  $\text{℥xij.}$ , warm bath, and an enema of assafœtida.

*Jan. 19th.* Less anxiousness and agitation; pulse less frequent; continuation of the delirium; her ideas being fixed on the same subject. When questioned sharply, the patient seems to wake out of a sound sleep; looks at those around her with an astonished air; assures us she is not sick, and that she desires to return home immediately. The same treatment was continued, with the addition of an opiate at night.

Since the 19th, the patient has improved rapidly; the sensibility has returned; her ideas are under the control of reason, and she appears happy and cheerful; answers all questions, and has a good appetite.

*Feb. 1st.* The patient has entirely recovered; she leaves the hospital to-day.

One month afterward she entered the hospital as a domestic, but finding the duties too severe, she has gone into service. Her health continues to be good.



*Diphtheritic Inflammation of the Pharynx and Tonsils.* BY  
HENRY A. RAMSAY, M. D., Raysville, Geo.

So much has recently been written upon diphtheritic affections of the throat, that I should forbear to offer this article to the profession, had not the disease here assumed some features of deviation from its usual course at other points. It is not my design to enter into a prolix argument upon the pathological rationale of the epidemic in question, but simply to present the readers of this paper with a truthful synopsis of what I saw at the bedside of the patient. Without descending farther into unessential details, I will remark that the popular cognomina of the disease among us are *sore throat, swelled tonsils, influenza, or quinsy*. An attack is usually preceded by a rigor or chill of more or less intensity; but this is not the invariable mode of premonition. We have often seen it preceded, and it is not unusual, by a pain in the *leg, arm, toe, finger, ear* or *abdomen*. With this premonitory outline, the disease assumes two distinct stages, viz. an acute; and typhoid, or malignant. After the supervention of the above symptoms, the acute stage is ushered in by sore throat, dryness of the throat, some pain in the head, some suffusion of tears, with a profuse discharge from the nose; the pulse is full and rather inclined to hardness; the skin is harsh and dry; the eyes are red, the tonsils, pharynx, fauces, etc., are swollen, and covered as far as the eye can observe, with patches of a membranous character, resembling ulcerations; deglutition is attended with some degree of difficulty; pultaceous substances being swallowed with more facility than fluids; there is usually a slight cough and discharge of a tough, viscid phlegm; the tongue is covered with a dirty white coat, almost instinctively impressing one with the idea of malignancy, or obstinacy; the parotid and submaxillary glands are faintly swollen; the limbs ache, and the patient complains of weariness, of indisposition, and of a burning about the throat, with thirst. When his vocal organs are much exercised, he craves water, but cannot swallow it with ease; his respiration is frank and open, but you can discern a nasal twang when he speaks; his appetite is perverted, and he seldom eats.

These symptoms continue for an indefinite period, not longer

usually than four or five days, when the malignant stage advances, by almost irresistible and insensible gradations; the tongue assumes a dark colour; almost a *charcoal* appearance. This appearance of the tongue exists sometimes in the first stage of the disease. The patient mopes about almost lifeless; he is stupid, dull, and despondent; his cutaneous discharge is cool, sticky, and unpleasant to the smell; his pulse is feeble and languid; his bowels, in the first stage constipated, now become loose, and his discharges fetid; he has loss of appetite, deafness, pain in the ears; his limbs ache and grow stiff; his mouth gets sore and bleeds, and, to use a familiar term, it feels "nasty" to him; his throat is not offensive, nor is his deglutition more impaired than in the preceding stage. He will remain possibly in this state for ten or twelve days, when he would surely die, if no plan of treatment were adopted. The above is a faithful description of the course of the disease here, so far as my professional limits extend, and I am led to conclude it is the same elsewhere, from what I have gathered from other creditable sources. The malady here is certainly very malignant, not exceedingly fatal, however, when we reflect for a moment upon its severity. The disease is not confined to any particular period of life. Young and old are alike the victims of its attack; our black population, however, are more frequently its subjects. The prognosis I regard as generally favourable. Children die usually in the first stage; adults in the second.

Most of the adults who have died were attacked with a pain in some one of the limbs; cerebral inflammation soon supervenes, and the patient sinks rapidly under its effects.

The causes of this affection are somewhat obscure. Many believe it of a specific origin, others think it generated by atmospheric fluctuations. It is common for "Doctors" to differ, and a diversity of sentiment is a prolific source for a diversity of thought; consequently a contrariety of opinion has a good effect upon inductive minds. This conflict of sentiment has induced me to ascribe this disease, at least so far as this country is concerned, to a malarious origin; I am aware this is a mooted point in reference to many diseases, but my observation leads me to adopt this conclusion in reference to this disease, though I am not disposed in this paper to enter the arena of argument upon these unsettled points.

It will not be amiss to advance one proposition which, if it be



tenable, and I cannot for a moment doubt it, is of increasing interest to the farmers of this county; it is that the malarious origin of this and many other diseases in this country may be based upon the following facts :

We are undergoing an agricultural regeneration in Georgia; our farmers are making large quantities of manure to retrieve their worn out hills; they are clearing up their small branch bottoms, hitherto uncared for and unthought of; they are felling from sheer necessity large forests, to open fresh fields of agriculture, and in a large majority of instances the timber is not cleanly cut, but left to *decompose*, to *rot*. All these circumstances conspire to make the sources of malaria prolific, and consequently to generate disease. The manure lots and beds are made, in nine cases out of ten, very injudiciously, near the dwelling houses, and it is seldom they are exempt from a nauseous stench. Now I have found it an unfailing rule, that those farmers who had the filthiest lots nearest their houses, had most cases of sore throat, particularly if the hands were engaged in scraping the lots or hauling the manure.

It is customary here in the fall, to draw into the lots a large quantity of leaves, cotton stalks and straw; this is permitted to rot during the winter and summer; hence the large number of cases of chill and fever we have had for the last few years.

So long as these pernicious practices are persisted in, so long will we have epidemics, intermittent and remittent fevers, in this country. But you ask me the remedy? It is so simple, that I will reply by propounding a simple question. If a small branch was inundating a fine plat of ground which you wished to preserve, how would you remedy it? You will readily answer, ditch it, turn it, *move it*. Move your lot, and that, too, at such a distance that its influence cannot affect you.

With merely remarking that I am induced to favour the idea that this disease is contagious, I will pass on to the treatment.

In the treatment of this affection, simplicity is our guiding star; and when I say simplicity, I mean an avoidance of every thing *harsh* or *drastic*. In the first stage, we use emetics of a mild kind; they relieve the throat of that sense of suffocation which sometimes exists, from the accumulation of tough phlegm. They also appear to us to exert a good influence in assisting the modi-

fication of the secretions of the mucous membrane of the throat, and not unfrequently cast off those membranous patches observed upon the tonsils and fauces. For all practical purposes, we know of no emetic equal to the common table salt, exhibited in a warm solution; we prefer it to all others for its mildness and expeditious of action. Next to this, we prefer a combination of mustard and ipecac, or the latter alone. We prescribe these emetics through the whole course of the disease; and so perfectly convinced are we of its propriety, that we challenge a comparison of success in an equal number of cases with any man.

After emesis, we prescribe a dose of castor oil, or sulph. magnesia, and pepper tea, every day or every other day, as occasion may require. As a local application to the throat internally, we use a warm solution of alum or vinegar and warm water; either has a happy effect. The nitrate of silver and kreosote, so often prescribed in diphtheritic diseases, did not succeed well in our hands. As an external remedy to the throat, we conceive the ordinary pepper poultice, or onion poultice, far superior to any other; indeed, we consider it of unequivocal advantage in every case. Scarification of the tonsils is our magnum remedium in all cases of throat disease, where the tonsils are much enlarged or swollen. As a therapeutic application, we doubt the efficacy of blisters. We have seen them the cause of immense suffering and pain. The suggestion of blood-letting we should deem detrimental, and not at all to be entertained.

The treatment of the second stage must be essentially modified in many respects. When the tongue is black, the circulation languid and dull, we know of no remedy equal to blue pill and cayenne pepper, to restore the vital energies. We do not mention the quantity, as the judgment of the practitioner can best determine the quantity necessary in any case. In combination with this, we use a warm pediluvium every night, and sometimes during the day. We also direct the occasional use of porter or wine, if there be much prostration.

Blisters in this form of the affection have a deleterious effect, and should be strongly reprobated. While we regard blue pill as an admirable agent in the malignant form, we do not wish to be considered as endorsing its use, or that of any other mercurial, in the first stage.



The preparations of cinchona have never had any good effect in our hands; they generally produce a feverish state of the system, ending in depression.

PENNSYLVANIA HOSPITAL.—*Surgical Wards.*—Service of  
DR. PEACE.

*Cases discharged since April 15th, 1849.*

	Cured.	By request.	Died.
Abscess, - - - - -	1	0	0
Amputation, - - - - -	1	0	0
Amaurosis, - - - - -	1	0	0
Burn, - - - - -	1	0	0
Cancer of lip, - - - - -	1	0	0
Caries, - - - - -	1	0	0
Concussion of Brain, - - - - -	2	0	0
Contusions, - - - - -	5	0	0
Deformity, - - - - -	1	1	0
Enlarged testicle, - - - - -	0	1	0
Erythema, - - - - -	1	0	0
Fistula in ano, - - - - -	0	1	0
" recto-vaginal. - - - - -	0	1	0
Fractures, simple 7, viz.:			
Lower jaw, - - - - -	1	0	0
Clavicle, - - - - -	1	0	0
Ribs, - - - - -	1	0	0
Arm, - - - - -	2	0	0
Arm and fore-arm. - - - - -	1	0	0
Fractures, compound 4, viz.:			
Skull, - - - - -	1	0	0
Hand, - - - - -	1	0	0
Fore-arm, - - - - -	1	0	0
Leg, - - - - -	1	0	0
Frost-bite, - - - - -	1	0	0
Inflamed knee-joint, - - - - -	1	0	0
" testicle, - - - - -	1	0	0
Necrosis, - - - - -	1	0	0
Paronychia, - - - - -	2	0	0
Syphilis, - - - - -	5	0	1
Stricture of urethra, - - - - -	1	0	0
Ulcers, - - - - -	6	0	0
Wounds 5, viz.:			
Incised, - - - - -	3	0	0
Lacerated, - - - - -	1	0	0
Gun shot, - - - - -	1	0	0
	48	4	1

The case of compound fracture of the leg is of some interest, from the fact that the patient refused to submit to amputation

which was recommended by the surgeons. With several chances against him he drew the one in his favour. Similar cases are of not unfrequent occurrence in every large hospital, and cannot in any way influence the general rules to be followed with like injuries.

John Doran, aged 23, a healthy looking young Irishman, was admitted the evening of November 8th, 1848, with a compound fracture of the left leg, about the middle, caused by the caving in of a bank of earth. The soft parts were extensively lacerated and contused, and about three inches of the upper fragment of the tibia projected through the wound, but the main arteries of the limb were untouched. On examining the limb more attentively, an old cicatrix with depressions here and there was discovered, covering nearly the whole of the shin, and on questioning the patient he stated that several years before he had had disease of the bones of that leg, and that several pieces had come away.

In consideration of the extent of the recent injury, and of the probability of the sloughing which would almost inevitably attack the contused and lacerated soft parts involving the old cicatrix, and so exposing more of the bone, amputation was recommended by the surgeons, but refused by the patient.

The accident had happened about four hours before admission, and reaction was fully established. Pulse about 85, moderately full.

The limb was placed in a fracture box and dressed with lint wet with cold water.

The next day he was found to have passed a restless night, but the constitutional disturbance was very slight. Pulse 85. Limb swollen and painful.

As soon as suppuration was established, the limb was placed in bran, and the sixth and eighth days small sloughs separated from the upper part of the wounds. No constitutional irritation whatever; pulse of ordinary force and frequency; appetite good.

The exposed portion of the tibia became necrosed, separated, and was removed at the expiration of the fourth week, and by the first of January the wounds had nearly cicatrized. Union, however, was not complete for some time afterwards, but he was allowed to arise the latter part of February, and was discharged well April 16th, 1849.



The amount of constitutional irritation which follows injuries, varies very much in different individuals. I have before\* related a case in which intense constitutional disorder, terminating fatally, was the result of a lacerated wound of the little finger. In the following case a bone was broken, and a large joint extensively opened, and still the natural tranquillity of the system was but slightly disturbed.

John Malone, Irish, aged 22, was admitted March 31st, 1849, with a compound fracture of the right patella, caused by a kick from a horse, two hours before.

The patella was broken transversely at the lower part; and through two external wounds, each about an inch in length, the finger could be passed deeply into the joint, which was distended with effused blood.

He did not complain of much pain. Pulse 86, and moderately full.

The wounds were closed with adhesive plaster, and lint dipped in the white of egg, and the limb was confined on a straight splint and, both to relax the extensor muscles and favour the return of blood, elevated on an inclined plane. Ordered a calomel purge followed by salts, and at night an opiate. Cold water to the knee and low diet.

The next day the knee was very much swollen, red and painful, but the constitutional symptoms were but trifling. Pulse 86. Skin moderately warm. Ordered a diaphoretic and sedative mixture.

*April 2d.* Knee about the same. Pulse 84. Sleeps well.

*5th.* Knee still much swollen and red, with some signs of suppuration. Removed the cold water dressing and applied a poultice. Pulse 84.

Discontinue the diaphoretic mixture.

*14th.* Knee much reduced in size, suppurating freely. General symptoms have continued without change.

*23d.* Suppuration much less. Knee very nearly of its natural size.

*May 1st.* Wounds entirely cicatrized, ligamentous union of less than half an inch.

*15th.* Union firmer than in many simple fractures of the patella

\* Examiner, March, 1849.

of eight weeks standing. He is now regaining the motions of the joint and almost fit to be discharged.

A sailor aged 43 was admitted into the Hospital April 12th, 1849, with secondary syphilis. He was said to have had syphilis several times, and each time to have been treated with mercury. At the time of his admission in addition to pains of which he complained most, he had a papular eruption on the skin and considerable irritation about the upper part of the throat. He was placed on the use of iodide of potassium, and an astringent wash for his throat.

He remained without much change until May 2d, when he was seized with a sudden dyspnœa, and difficulty of expectoration. There was no alteration of the voice, but the respiration was audible at a short distance and prolonged. Very slight pain was occasioned by pressure on the larynx. Examination of the chest by auscultation detected no abnormal sounds. He was relieved by the use of warm baths, blisters to the throat, and a nauseating solution.

On the 4th he had another attack, which was relieved by the same remedies.

During the fifth he was much improved, but on the morning of the 6th he had an attack so sudden and severe as to cause his death in a few moments.

The autopsy was made twenty-four hours after death. The trachea and larynx with the tongue were removed from the body, and on slitting up the larynx the posterior part of the cricoid and a part of the thyroid cartilage were found converted into bone, carious, and containing a loose sequestrum, exhaling a most fetid odour. The sub-mucous tissue above and to the left side of the rima glottidis was highly œdematous, and completely overhung this aperture. The lungs were congested, but otherwise they, as well as the other viscera, were healthy. Further examination detected a cartilaginous stricture at the membranous portion of the urethra.

SPENCER SERGEANT,  
Resident Physician.

*Pennsylvania Hospital, May 15th, 1849.*



## BIBLIOGRAPHICAL NOTICES.

*Practical Pharmacy; the Arrangements and Manipulations of the Pharmaceutical Shop and Laboratory.* By FRANCIS MOHR, Ph. D., Assessor Pharmaciæ of the Royal Prussian College of Medicine, Coblentz; and THEOPHILUS REDWOOD, Professor of Chemistry and Pharmacy to the Pharmaceutical Society of Great Britain. Edited, with extensive additions, by WILLIAM PROCTER, Jr., Professor of Pharmacy in the Philadelphia College of Pharmacy. Philadelphia: Lea & Blanchard, 1849.

The class of technical works designed to illustrate the practical operations necessary in the various arts, long popular with the Germans as Hand-books, and with the French as Manuals, has of late years become common amongst us, and although skill and readiness in any art can only be thoroughly acquired by practice, there is no doubt but that their acquisition may be much facilitated by properly adapted book instruction.

Of this class is the work now before us. It is a treatise on Practical Pharmacy, embracing a description of the manipulations and apparatus necessary in this art, and appears to fill all the requisites for a work of this character. It is full and minute without unnecessary diffusion, and contains instruction precisely of that practical kind which is to be desired in a manual of pharmaceutical operations, and which is not to be found in works of more scientific pretensions.

The reputation of Mohr and Redwood, the original authors, is a guarantee that the work contains the results of the best practical experience of Germany and England, and the emendations and additions of Professor Procter in adapting it to the present state of American Pharmacy, are judicious and valuable. The emendations consist in the transposition and classification of Mohr and Redwood's matter, according to the subjects treated of, making it more convenient for reference, and neater and more systematic in arrangement; the addition of much valuable new matter which has increased the book more than one fourth in size, including about 100 wood cuts.

The work, as now published, contains about 570 large octavo pages, handsomely printed from good clear type, and illustrated by over 500 well executed wood cuts of chemical and pharmaceutical apparatus.

The First Chapter treats of the general arrangement of the shop or dispensary, the laboratory, the store-room, &c., and is of interest to apothecaries and such physicians in country localities as are under the necessity of preparing and dispensing themselves the medicines required in their practice. The Second Chapter contains minute directions as to weighing and measuring, the proper construction of balances, the various methods of determining the specific gravities of solids and liquids, hydrometric tables, &c. Two chapters follow on the construction of furnaces, the adaptation of fuel, and the various methods of applying heat, the effect of temperature in pharmaceutical operations, &c. After which are described the mechanical contrivances for the comminution and pulverization of drugs, such as mortars, cutting knives, drug mills, &c. The method of separating precipitates, use of filters, the clarification of liquids, and decolorization of syrups and oils by the use of charcoal, are very fully described, as are also the various forms of hydraulic and other presses for pharmaceutic uses.

In the Ninth Chapter, which treats of the methods of obtaining solutions for syrups, extracts, tinctures, &c., will be found a very useful table of solubilities which has been incorporated with the work by the American editor, taken chiefly from Henry and Gibourt. In this connection the displacement process is elaborately explained and examined, and the conclusion the authors arrive at coincides with our own long since formed, that except in circumstances where expedition is especially important, as, for instance, the preparation of small quantities of tinctures or infusions for immediate employment, the old method of maceration or digestion, with occasional agitation and subsequent expression of the liquor from the mark or dregs, is to be preferred.

The various precautions necessary in the preparation of extracts are carefully noted, and all the different forms of evaporating apparatus well described and figured. We extract the following in reference to a class of extracts little known.

“There are some drugs which contain so large a proportion of volatile oil and resin, that these may be extracted as fluid or semi-



fluid, oleo-resins, analogous to copaiba, and highly eligible for medicinal use, owing to their uniform strength and consistence. Cubebs, black pepper, capsicum, ginger, cardamom seeds, pellitory, male fern, and wormseed are among these substances. The menstruum employed is ether. The drugs in moderately fine powder are compressed in a displacer (fig. 270,) and treated directly with the ether, until as much tincture is obtained as equals twice the weight of the substance treated. When cubebs are thus treated, the ethereal tincture is introduced into a retort, and by means of a water bath kept at 120° Fahr., seven-eighths of the ether is distilled off, observing to introduce some fragments of glass into the retort to facilitate the liberation of the ethereal vapour. The fluid residue is then placed in an evaporating capsule, and left exposed until the remainder of the ether passes off. Cubebs yield about 15 per cent. of a fluid oleo-resinous extract by this process. In the case of cardamoms, the extract consists of volatile oil, fixed oil, and a little resin, and is so entirely fluid and permanent, that it may be used with great propriety in pharmacy, for aromatizing powders in prescriptions. The presence of the fixed oils tends to preserve the volatile oil, which, when pure, soon changes by the exposure to the air."—p. 310.

The ethereal extract, or oleo-resin of cubebs, we look upon as a valuable preparation. It has been much used in the practice of one or two physicians of this city, with satisfactory results. Ten or twelve drops fully represent the medicinal activity of one drachm of cubebs in powder, and the diminished bulk makes it much more eligible for administration. It may be given dropped on sugar, or floating on a tablespoonful of water, or made into a pill mass by the admixture of an equal weight of magnesia. The essential oil of cubebs is frequently prescribed under the impression that it is the active principle. This is an error; the peculiar sensible and medicinal properties of the piperaceæ do not reside in the essential oil, but chiefly in the soft resin. Thus we find the essential oil of the piper nigrum almost tasteless, the ethereal extract or oleo-resin, on the contrary, sometimes, but improperly, called the "oil of black pepper," is powerfully acrid.

The following refers to a class of preparations but little noticed in this country, which we think country physicians might frequently cause to be prepared from indigenous vegetables for their own use:

"PRESERVED JUICES, OR ALCOOLATURES.—M. Beral, some years

since, proposed a class of tinctures of narcotic plants, in which the waters of vegetation of recent juices acted as the water of dilution of the alcohol. There are two ways of proceeding—one by adding alcohol to the bruised plant, macerating and expressing;—the other is to express the juice, and add sufficient alcohol to it to preserve it. The latter is the plan of Mr. Squire, of London, who, under the name of preserved juices, introduced these tinctures to the attention of English pharmacutists. The juice obtained at the time most favourable to the development of the virtues of the plants, is mixed with half its weight of alcohol, and after a time filtered. Wormwood, taraxacum, and the narcotic plants are thus treated. The advantage proposed to be gained by these preparations is, that the active constituents of the plants are unchanged by the process of drying. Owing to the variable proportions of water in the juices of the same plant, at different times, they are liable to vary in strength from this cause. Mr. Redwood found that the juice of the *Lactuca sativa* had the sp. gr. 1.031 in the evening, and 1.026 the following morning.” p. 279.

The distillation of essential oils, &c., the rectification of ether and alcohol, and the sublimation of benzoic acid, calomel, &c., are fully described, as are also neutralization and the use of test papers with minute directions in acidimetry and alkalimetry. We quote the following observations on the interesting subject of the extraction of certain essential oils, which do not exist ready formed in the substances from which they are obtained, but are formed by reaction between their proximate constituents, during the process to which they are subjected.

“There are a few substances in obtaining essential oil, from which it is necessary to conduct the process of distillation in a peculiar manner. Bitter almonds, mustard seeds, and horseradish, are of this class. These substances do not contain essential oil ready formed, but the oil is produced in the process to which they are submitted. Bitter almond cake, for instance, from which essential oil and a distilled water are obtained, contains two bodies, amygdaline and emulsine, by the mutual reaction of which, together with water, the oil is produced. Black mustard seed, also, contains two analogous bodies, myronic acid and myrosyne, which, in like manner produce the essential oil of mustard. Bodies of analogous character exist in horseradish and in laurel leaves. The emulsine and myrosyne of the almond and mustard seed, and the corresponding substance in the other plants mentioned, undergo a change similar to the coagulation of albumen, when heated to a temperature approaching that of boiling water, and when thus coagulated they are no longer capable of producing essential oil with the other vege-



table principles. It is necessary, therefore, in obtaining essential oil from this class of substances, to macerate them with cold or lukewarm water, for some time previous to the application of heat. If boiling water were added at once to these substances, it would coagulate and render inoperative one of the constituents from which under other circumstances, the oil would be formed. In distilling bitter almonds, the cake, which has been previously freed from fixed oil by expression, is powdered and mixed with about twenty parts of cold water. The mixture is allowed to stand for twenty-four hours before the application of heat, during which time the essential oil is produced; it is then submitted to distillation." p. 353.

The 13th chapter treats of the absorption of gases, in connexion with which is given the method of preparing Quevenne's metallic iron reduced by hydrogen.

Chapter 14th is entirely new, being the work of the American editor. It is a valuable treatise on the preparation and purification of the fixed oils and fats used in pharmacy, and on cerates, ointments, soaps and plasters. From this chapter we extract the following:

*Fixed oils as obtained by expression.*—"The oil as it runs from the press is rarely fit for use. It has in the case of castor oil, albuminous and watery particles admixed, and requires to be boiled with water, during which the albumen is coagulated, rises to the surface and assists in the clarification of the oil. This is skimmed off, the oil ladled from off the surface of the water after boiling, and is subsequently heated to remove the watery particles which adhere to it. It is in this last operation that the oil is most liable to be injured, because as soon as the water is vaporized, the temperature of the oil rapidly rises, and it acquires acrimony in proportion. If steam heat, under a pressure of one or two pounds per inch, were employed, no such injury would result.

Fixed oils are generally coloured, though not so naturally. The yellow hue of the oil of almonds is due to the colouring matter of the episperm of the kernel, and the yellow dust which adheres to it, due to attrition. The separation of these by blanching would be too tedious, although sometimes done for particular uses.

"The second process by boiling the bruised seeds in water after having gently torrefied them, and skimming off the oil as it rises to the surface, was formerly adopted in making castor oil; and much of that now used for domestic purposes in the West Indies is thus made by the negroes. Oil thus prepared is greatly inferior to that extracted by expression. This second process is resorted to in the extraction of cod-liver oil. The livers freed from the membranes are cut in pieces, placed in a tin vessel with a portion of water, and

heated. The oil gradually rises to the surface and is skimmed off, to be subsequently clarified by straining, &c. The more recent the livers, and brief and moderate the heating process, the lighter coloured and less offensive the oil. The more common variety is obtained by throwing the livers in heaps, exposed to the sun, during which they undergo decomposition, and the oil, dark coloured and rancid, flows from them to a suitably arranged receptacle. According to M. Jongh, the light-coloured, carefully prepared oil, contains more iodine and bromine than the dark rancid variety."

"Lard, the adipose matter of the hog, varies much in value for pharmaceutical purposes, as found in commerce. This arises chiefly from the frequent want of care in its preparation, and partially to the part from which the lard is obtained. The fatty deposit of the omentum, mesentery, and in the region of the kidneys, is that most appropriate for pharmaceutic use, because it requires less heat in rendering it, and the lard has a smoother and more homogeneous texture. So important is good lard in the fabrication of some cerates and ointments, that when it is not attainable of unexceptionable quality, it is worth while for the apothecary to render it himself from selected fat. This should be cut in small pieces, freed as much as possible from the adhering membranes, introduced into a boiler with a portion of water, and boiled until the fat is fused from the cellular tissue, in which it is naturally deposited, and the water has all evaporated. As soon as this is the case, and before the temperature of the fat rises much above  $212^{\circ}$ , it should be dipped out and strained. It is the excessive heat employed at this point of the process, together with its influence on the pieces of flesh and membranes which generally accompany the crude fat, that the inferior quality of much of the commercial lard is attributable."

When lard or other fats are rendered in this way it is difficult to free them entirely from adherent water, the presence of which tends to produce rancidity by promoting oxidation. We prefer the method generally adopted by perfumers in preparing them, which is, after slicing the crude fat, to beat and triturate it in a marble mortar until the cellular tissue is sufficiently torn to allow the exudation of the fat on melting, which should be done in a porcelain vessel by the heat of a water or salt water bath, and the fat, when sufficiently liquified, separated from the membrane by straining through a double flannel bag without expression. Thus prepared it can be preserved for a long period perfectly free from rancidity if excluded from the air.

The remainder of the book with the exception of the last chap-



ter is occupied with useful practical observations regarding various miscellaneous operations, such as sealing and bending glass tubes, connecting and luting apparatus, covering the outside of glass flasks, &c., with a protecting coat of copper by galvanic deposition, the method of preparing gelatine capsules for the administration of copaiba, &c., graduating measures, the various contrivances for the inhalation of ether and chloroform as anæsthetic agents, &c., and on the various manipulations requisite in extemporaneous pharmacy, well calculated to instruct the operator in the pharmaceutical shop and laboratory.

The final chapter may be regarded as an appendix, treating of the use of chemical reagents and the method of ascertaining their purity. This chapter has been added to the original work by the American editor, and will be found a convenient compend of the matters referred to.

It is difficult to convey a satisfactory idea of a work of this kind, treating as it does, of many various subjects in the limited space at our disposal, and we are conscious that in this hasty notice we have given a very inadequate impression of its merits. It is a book, however, which we suppose will be in the hands of almost every one, who is much interested in pharmaceutical operations, as we know of no other publication so well calculated to fill a void long felt in the absence of a practical work of this character.

In conclusion we would again allude to the excellent mechanical execution of the work, which is very creditable to the taste and liberality of the enterprising publishers.

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*Chemical Analysis, Qualitative and Quantitative.* By HENRY M. NOAD, Lecturer on Chemistry at St. George's Hospital, etc., etc. With numerous additions by CAMPBELL MORFIT, Practical and Analytic Chemist, &c. With illustrations. Philadelphia. Lindsay & Blakiston, 1849. pp. 572.

Perhaps there is no species of knowledge that exhibits the intellectual advancement of modern times more strikingly, than that by which the elements of a compound, natural or artificial, may be separated and their quantities determined, often with the greatest accuracy. Rare and valuable substances, as lapis lazuli,

highly prized in the arts, have been successfully imitated by resorting to this scientific "open sesame," and now, by extending its principles to the organic productions, bodies hitherto only elaborated by the mysterious process of secretion, have been created by the chemist after the agency of analysis has pointed out their elementary constitution. In the United States the cultivation of chemical science has not kept pace with some other departments, and has been more directed to the mineral kingdom in connection with geological pursuits, than to extending the boundaries of the science itself. This has arisen partly from the sparsity of practical schools, and the scarcity of treatises on analysis. The last deficiency is being rapidly done away, as we already have more than one manual, and the book under the above title is now presented as a new and valuable offering to the student.

The work of Mr. Noad consists of two parts, qualitative and quantitative analysis. After describing the reagents usually employed with directions for ascertaining their purity, our author notices the reactions which mark solutions of the simple bases and acids when brought in contact with these reagents, as well as the evidence afforded by the blow-pipe, forming a set of maxims or characters by which each substance may be recognized in a separate state. The following chapter is devoted to the explanation of systematic qualitative analysis, in which substances are recognized in the presence of each other, due allowance being made for their mutual influence on the tests. This knowledge requires a very considerable degree of memory and close familiarity with reagents to give proficiency, and has been carefully and minutely explained in the pages before us. Examples are given of the modes of procedure in identifying mixed bases, and mixed acids, and the poisonous acids and metals have received a special notice. This part of the work is terminated with tables illustrating the several steps of the processes for determining the nature of bases and acids.

The second part of the book enters fully into the details of quantitative analysis, commencing with the alkaline metals. It need hardly be said that the author has availed himself of the standard works of Rose and others, in the composition of his task, as well as the mere recent facts and suggestions interspersed through the Journals. The immense importance of this branch of



chemistry to the progress of the arts, and to the science of chemistry itself, places it in the foremost rank of chemical studies. It is that which has received the smallest share of attention in this country, and it is to be desired that the facilities for its cultivation afforded by practical schools, will be increased and patronized. In no country is there a greater field for the application of chemical knowledge to the benefit of society, by increasing its resources in the several regards of agriculture, arts, and mines, than in this; and to the organic chemist the numerous items of *materia medica* which originate from our wide spread soil, opens a field for the exercise of his favourite pursuits, teeming with objects of interest.

Our author has devoted about forty pages to the method of ultimate organic analysis. American chemists have hardly as yet touched this department of analytical investigation, and the accuracy of the instruments, and the expertness of the manipulation required to give value to its results, may afford a good reason in a country where as yet the patrons of science are nearly all found in the ranks of art and manufacture, whilst but comparatively few are prepared by acquirements or means, to tread the quiet, unobtrusive and unprofitable pathway of abstract scientific pursuits.

There is one branch, however, that has not been treated of as a distinct subject by our author, or by any other writer on analysis with whom we are acquainted, and that is *organic proximate analysis*. There are scattered through the journals and standard works a large number of facts, that if brought together in the form of a special treatise on proximate analysis, would prove extremely useful to a large class of chemical inquirers. We are well aware of the difficulties of the subject—that in many cases the bodies to be isolated are very complex and readily undergo change in the process—yet we believe that sufficient observations exist to form the ground work of a valuable manual. In this, as in inorganic analysis, two departments would be required: the detection of each constituent, and the determination of the proportion of each ingredient. This last is probably the next difficult problem in analytical investigations, and the wide differences that are presented in the results of even distinguished operators, is a sufficient evidence of the reality of this opinion. The importance of this kind of analysis is becoming daily more important in reference to pathology, physiology and pharmacy. The composition of drugs

and the relation of their active constituents to the mass of associated matter, is too important in the construction of formulæ and their practical accomplishment, to need comment, and we trust that some well qualified individual among the numerous organic chemists abroad, will fill this hiatus in chemical literature.

“The care and fidelity with which the author has performed his laborious task, has left little more to be done by the editor than to make such additions as are called for [by the latest investigations in chemical analysis.” We observe, however, that the introductory remarks in the original on manipulation have been omitted as too succinct “to be serviceable to the student,” who is referred to a larger work for this information, whilst a chapter on equivalent proportions, chemical notation, and the principles of nomenclature have been substituted. Now we have not the slightest objection to the introduction of this chapter, which adds to the usefulness of the book, nor to the reference to the editor’s work on manipulation, but we decidedly protest against the omission of the author’s remarks, merely on the ground that they are not sufficiently extended; for although we agree with the editor that they are too brief for a thorough teaching, yet they contain valuable hints that were altogether in place at the commencement of such a work as that under consideration.

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*A Manual of Auscultation and Percussion.* By MM. BARTH & ROGER. *Translated with additions, by* FRANCIS G. SMITH, M. D. Philadelphia. Lindsay & Blakiston, 1849. Second edition.

This little work contains an exposition of the more important physical signs of disease. It is principally taken up with a description of those derived from the thoracic viscera, but includes, besides, a sufficiently full account of the application of auscultation and percussion to the recognition of the morbid states of other organs of the body. We are first made acquainted with the proper method of conducting physical exploration, and with the signs afforded through these means in the *healthy* state of the organs. As the respiratory apparatus responds to our inquiries more fully and distinctly than any other, to it is given the first place, and the



alterations in its physiological condition classed and described according to their grade, rythm, character, and the presence of abnormal sounds. These signs are then presented to us in a tabular form, (as arranged by Dr. Walshe,) by which, at a glance may be seen their physical cause, ordinary seat, and the diseases in which each one is observed. The physical signs afforded by the circulatory apparatus, and which are appreciable by auscultation, are next described in the same manner, after which follows a concise enumeration of the signs furnished by auscultation of the abdomen, head, extremities, uterus, and foetal heart. Part II. commences with a short historical notice of percussion, followed by an account of the application of this method of exploration, treated in the same order as that by auscultation. We notice that the translator has appended a description of the employment of both these methods combined, as introduced into practice by Drs. Camman and Clarke. On the whole, there is no better nor more succinct account of this important branch of medical diagnosis than the manual of MM. Barth and Roger. The arrangement of its contents is natural and lucid, and the reasoning of the authors is marked by a mathematical conciseness and precision, which enable the reader to follow their analyses with the most perfect satisfaction. It has been translated into various modern European languages, and the fact of Dr. Smith's translation having already reached a second edition, sufficiently proves that it is justly appreciated in our own country.

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*A Practical Compendium of Midwifery ; being the Course of Lectures on Midwifery and on the Diseases of Women and Infants, delivered at St. Bartholomew Hospital, by the late ROBERT GOOCH, M. D. Prepared for publication by GEORGE SKINNER, Member of the Royal College of Surgeons, London. Fourth American Edition. Philadelphia, Barrington and Haswell, 1849.*

The above Volume contains the substance of a Course of Lectures on Midwifery, delivered at St. Bartholomew Hospital by the late Dr. Gooch. As an effective writer, as a profound thinker, and as an experienced obstetrician, Dr. Gooch has no superior and but few equals, and it is a source of regret, that his brief career pre-

vented him from publishing a more full and extended treatise upon Midwifery and the Diseases of Women. We do not mean by this remark to depreciate the value of the volume before us, for we know of no medical work, which contains, in an equal number of pages, so much that is practically useful to the obstetrical practitioner. Throughout its pages, the great principles of obstetrical science are propounded in a style peculiarly concise and wonderfully calculated to leave a lasting impression on the mind of the reader.

In the first lecture, we have an account of "the natural functions, and of the diseases of the female organs of generation." Our author's remarks on Chlorosis, Amenorrhœa, Dysmenorrhœa, and Menorrhagia are admirable, containing in our opinion, in a few words, all that is required for a proper comprehension of the pathology and treatment of these diseases.

The second lecture contains a pretty good account of Conception—of the Gravid Uterus—of the signs and diseases of Pregnancy, &c. The article on Abortion is most excellent, and we would recommend its careful perusal to all who may wish to comprehend the best mode of managing this unpleasant and sometimes dangerous accident.

Lecture 3d is devoted to the consideration of Labour—the phenomena of which are well described. The major portion of this chapter contains some capital remarks on the delivery of the placenta. The skilful management of the placenta involves duties of the highest responsibility, and our author very justly remarks that "all anxiety with the family ceases, as soon as the child is born; but mine there begins: and if the friends of the patient knew as well as I do, the danger liable to attend the separation of the placenta, they would feel as I do." Thus impressed with the difficult duty of the obstetrician, we need not wonder that Dr. Gooch has devoted many pages to its consideration—leaving behind him a model chapter on the best and safest method of managing the delivery of the after-birth, with which we are acquainted.

Difficult labours are treated of in the fourth lecture. These deviations from natural labour are arranged under three heads: 1st, Impeded labour; 2d, Unnatural presentations; 3d, Complicated labour.

In impeded labours, the position of the child is supposed to be natural; its delivery being interfered with, by undue size of



the fœtus ; by contractions of the pelvis ; by rigidity of the soft parts ; by debility, &c. &c. The mode of ascertaining the various causes of impeded labour, as well as the treatment requisite in each case are clearly pointed out by our author. In commenting upon those positions of the head, in which the occiput is placed posteriorly, our author remarks, that "the difficulty in these cases is overrated—if the face is towards the pubes, this position is certainly unfavorable to an easy delivery ; but if this deviation is not complicated with other causes of impediment, it is of no great consequence. To accomplish the delivery may require a few additional pains, but not in general the use of instruments as is by some supposed." The import of these remarks is peculiarly practical, but our author does not seem to have been aware of the frequency of these positions, or of the constancy with which, by the natural efforts of the female, the occiput is rotated round towards the pubic arch. The more recent observations of M. Nægèlè on this subject, have established the truth of these facts—with which, we think, the reader should be made acquainted in a subsequent edition of this work.

The remaining portion of this lecture is taken up with an account of the injuries incident to protracted labour, including a description of the mode in which the forceps should be applied, &c. &c.

Under the head of preternatural presentations, we have included those of the breech, arm and funis. The management of arm presentations is exceedingly well described, and we would refer the reader to our author's excellent remarks upon the best mode of turning the fœtus in utero.

Labours may be complicated by the occurrence of convulsions, and of hemorrhage—by plurality of children, by rupture of the uterus, &c. &c. The sections on Convulsions and Hemorrhage are full of practical wisdom—forming an invaluable guide in the management of these dangerous accidents.

Lecture 6th contains a history of the general management of women after delivery.

In Lecture 7th we find more than twenty pages devoted to the consideration of the causes, symptoms and treatment of Puerperal fever—of Inflammation of the Uterus—of Puerperal Mania—of Phlegmasia Dolens and of Inversion of the Uterus. The remarks

on these interesting subjects, though concise, contain much valuable information to the physician engaged in active obstetrical practice.

Lecture 8th contains a succinct account of the general management of Infants—of their Congenital Malformations, and of the diseases to which they are liable.

In conclusion we would commend the publishers for the handsome style in which the work is gotten up, at the same time suggesting to them, the propriety of having a work of such intrinsic worth put into the hands of some capable Physician, for the purpose of adding such notes as may be necessary to bring it up with the existing state of obstetrical science.

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## THE MEDICAL EXAMINER.

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PHILADELPHIA, JUNE, 1849.

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AMERICAN MEDICAL ASSOCIATION.

*Second Annual Meeting.*

The Association met in Boston, May 1st, in the Hall of the Lowell Institute.

The President, Dr. Alexander H. Stevens, of New York, in the chair.

Dr. J. C. Warren, of Boston, on behalf the Massachusetts Medical Society, presented to the Association the salutation and welcome of his constituents; after which an address was delivered by Dr. Stevens, in which he dwelt upon the objects and duties of the Association, the advantages already derived from it, by the partial reforms which had been commenced in accordance with its recommendations; as well as the great good which must necessarily follow from promoting personal intercourse among members of the profession from various parts of the country, and thus ensuring interchange of sentiments and opinions at stated periods.

The committee of arrangements reported twenty States represented, and two hundred and eight delegates, as registered at ten o'clock the



evening previous. The number present, as afterwards reported, was about four hundred and fifty.

The committee on nominations, consisting of one from each State, appointed by the delegates, reported the following officers for the ensuing year, and their nomination was unanimously confirmed. *President*, DR. J. C. WARREN, Mass.; *Vice Presidents*, DR. J. P. HARRISON, Ohio, DR. H. H. MAGUIRE, Va., DR. A. FLINT, N. Y., DR. R. S. STEWART, Md.; *Secretaries*, DR. ALFRED STILLÉ, Pa., DR. H. J. BOWDITCH, Mass.; *Treasurer*, DR. I. HAYS, Pa.

The committee on nominations were continued, and instructed to nominate the usual standing committees for the ensuing year; and to facilitate their operations, it was requested that the names of suitable persons to act upon these committees should be handed in.

Dr. Condie, of Philadelphia, chairman of the committee on Practical Medicine, presented the annual report. After reading a small portion of it he was interrupted by a motion to refer it to the committee on publication, which after some discussion was carried.

[We cannot refrain from commenting upon the impolicy, to say nothing of the discourtesy, of such a proceeding as this. By establishing a precedent of this kind, one great motive for thus assembling from the distant portions of the Union is abolished, viz: the interchange of sentiments and opinions that arise from the discussion of the reports. A prominent feature in the organization of the Association seems to have been lost sight of, to wit, the advancement of the knowledge, and the extension of the usefulness of the profession at large.

If the whole object of the Association be to appoint committees whose reports shall be printed in the transactions without comment, this can be accomplished without the sacrifice of time that now takes place in travelling from remote portions of the country.

Aside from all this, there is a *discourtesy* in thus silencing those who have spent much valuable time in the diligent search after material wherewith to enrich those reports, and it offers but little encouragement to future committees, when they see the labours of their predecessors so coldly received. Neither do we think the matter was mended by the proposition to refer the reports to the committee on publication, previously to their being read in the Association, that they might select such parts as seemed most important, and omit the rest, and thus "cut out" a sufficient amount of work to occupy the Association during a specific season. There are few authors, we imagine, who would quietly submit their bantlings to the unmerciful pruning of a publishing committee, in order that time may be allowed for the effervescence of gaseous debaters. We are credibly informed that several original and important communications were withheld in consequence of the course adopted in relation to the committee on Practical Medicine. It is to be hoped, therefore, that if committees

are appointed in the spirit of the organization of the Association, that in future meetings they will be heard with respectful attention.]

Dr. N. R. Smith, of Baltimore, presented and read the annual report of the committee on Surgery. A large portion of the report was occupied in the consideration of anæsthetic surgery, to which it was entirely favourable. The committee consider it inadmissible to perform a serious surgical operation without the use of chloroform, inasmuch as by it both safety and immunity from pain are secured. Of the two prominent anæsthetic agents, chloroform and ether, the former is preferred, inasmuch as its unfavourable effects, when they do occur, are visible at once, whereas, when ether is used, its consequences sometimes remain long after. Dr. S. thinks he has traced irritative fever to the protracted influence of the latter agent.

Chloroform is the most powerful anæsthetic agent known, and requires that care should be used in its administration. It should never be used in trivial cases, nor in diseases of the heart: a due admixture with atmospheric air is also requisite for safety. In careful hands it is an invaluable agent. The author of the report has administered it *thirty-four* times to one patient, a young woman, to the extent of complete insensibility, without any unpleasant result. Prof. Mott, of New York, has performed operations which he would not have attempted without the aid of chloroform. In the administration of it, it should be stopped the moment that insensibility occurs. Prof. Simpson has published his opinion that one hundred lives have been preserved by the use of chloroform, where one has been lost by its use. He further states, that the mortality where chloroform is used, is much less than in similar cases where its use is dispensed with.

On the subject of Fractures, the report was also voluminous; this department was occupied mainly, however, with the exhibition and explanation of an apparatus for the treatment of fractures of the lower extremities, invented by the chairman. As this has been known for some years to the profession, and has been used in many of our public institutions, a description of it is unnecessary. The same is true of the instrument exhibited for the operation of lithotomy. The latter is, moreover, open to the objection that it almost supersedes the necessity for a correct knowledge of surgical anatomy.

The entire report was listened to with marked attention, and referred, without discussion, to the committee on publication.

Dr. C. R. Gilman, of New York, acting chairman, presented and read the annual report of the committee on Obstetrics.

The greater part of this report was also occupied in the discussion



of anæsthetics in midwifery ; and in order to present the subject candidly to the Association, the principal objections of those opposed to its use were incorporated into the report. The committee give it as their deliberate opinion, that the chances of a patient's recovery are greatly increased by the use of anæsthetics, and the question is not whether they may or may not be safely administered, but whether they *can be rightfully withheld*. Who that has ever compared the panting and exhausted subject of an instrumental labour, with the calm and tranquil recipient of anæsthesia, could fail to arrive at the same conclusion ? In regard to the choice of anæsthetics, the report declares that chloroform has every advantage over ether, except *in point of safety*, but that in experienced hands this objection does not obtain. Dr. Channing's contribution to the literature of this subject, in his work "Etherization in Child-birth," received a justly deserved and flattering notice in this portion of the report. The report was accepted, and referred without comment to the committee on publication.

Dr. J. P. Harrison, of Ohio, presented and read the annual report of the Committee on Medical Literature. The report embraced the division marked out by the constitution, viz :

*First.* The general character of medical periodical literature in the United States.

*Second.* A consideration of the most important and prominent articles that are thus brought to our notice.

*Third.* Original or native American medical publications.

*Fourth.* Medical compilations and compends of American writers.

*Fifth.* American reprints of foreign periodical medical books.

*Sixth.* All such measures as may be deemed advisable for encouraging and maintaining a medical literature of our own.

Under the first head, the report states that there are twenty American medical journals published in the United States, and four reprints of foreign journals. Of these, five are quarterlies, six are issued bi-monthly, six monthly, one three times a year—the Transactions of the Philadelphia College of Physicians—and one weekly.

Through the agency of these journals much valuable material has been added to the medical literature of the country, and their pages have been enriched by contributions from the most eminent members of the profession both at home and abroad.

Of the American contributions a brief summary was embraced in the report.

The library of the Pennsylvania Hospital was described as the largest in the country. Commencing originally in 1762 by the donation

of a single volume by Dr. Fothergill of London, it has increased to the extent of ten thousand volumes. There are many other extensive libraries throughout the country, some containing seven thousand, others three thousand, and two thousand volumes. The Library of Harvard College numbers one thousand seven hundred and sixty-nine volumes; that of the medical department of Harvard University twelve hundred volumes.

That portion of the report embracing the measures deemed advisable for encouraging and maintaining a medical literature of our own, stated that there was much valuable literary material unknown to the public in consequence of deficient means on the part of the authors, or a disinclination on the part of publishers to take hold of anything that was not endorsed by a well known name, and instanced the unpublished literary remains of the late Dr. Forry, of New York. It recommended that a board of publication should be established, to whom such materials should be presented, with authority to publish them should they be deemed worthy.

Appended to the report was the following resolution:

*Resolved*, That a committee of three be appointed to take into consideration the measures recommended in this report, for the promotion of our national medical literature, with instructions to report at the next annual meeting.

The report of the Committee on Medical Literature was accepted, and referred to the committee on publication, and the resolution appended to it was adopted; Drs. Horner, Condie, and Hays, of Philadelphia, were appointed the committee.

Dr. G. B. Wood, of Philadelphia, moved that it be the duty of the same committee to report on the subject of an international copy-right law.

In urging this motion Dr. Wood remarked, that it was essential to the medical literature of the country, that an international copy-right law be established. He claimed it for our own writers, who now receive no encouragement. American publishers can now procure and reprint foreign books for a less price than American authors can afford to write them. They must produce a better book, a great deal better book than the English writer, or they cannot find an American publisher who will pay them for their work. He claimed it also on the ground of justice to English writers, who were despoiled of the labour of their head and hands by the cupidity of our booksellers.

The motion was *carried*.

Dr. M. L. Taft, on behalf of Dr. F. C. Stewart, of New York, chair-



man of the Committee on Medical Education, presented and read the annual report, which, in accordance with the requirements of the constitution, embraced a complete account and comparison of the medical institutions of Europe and this country, with the requirements for admission and graduation; the number of students, graduates, professors, branches taught, terms of study, &c.; the regulations and requirements of Army and Navy Boards of Examiners in Great Britain and this country; the legal requirements exacted of medical practitioners in the several States of the Union; together with remarks on the general condition of medical education in the United States, compared with other countries, with suggestions as to its improvement.

In the comparison of schools abroad and at home, the University of Pennsylvania was held up as the model for imitation in the United States, that institution being the oldest, and coming nearest to the standard deemed most desirable. The report further stated that to the inquiries addressed to the thirty-seven medical schools in the United States, in relation to the requirements for admission, graduation, &c., answers have been received from twenty-five.

With regard to the best method of improving medical education, the report recommended the insisting upon preliminary education, and the appointment of primary boards of examiners, whose certificate of qualification shall be essential to the reception of the student into a medical school. The board should examine the candidate (should he not be a graduate of some literary institution) upon Latin and Greek, and require suitable testimonials as to moral character. The subject of the extension of the lecture term was not alluded to in the report, probably because the Association had already settled that question affirmatively.

Dr. John Ware, of the Medical department of Harvard College, presented a paper in answer to the queries of the Committee on Education, from a Committee of the Faculty who were appointed to take into consideration some of the recommendations of the Medical Association with regard to medical lectures, particularly in reference to extending the courses of lectures beyond the established period of four months. The purport of the paper was that the Faculty were constrained to differ from the views of the Association with regard to the prime importance of lectures, and also that in their view no profitable object could be gained by extending the term of lectures beyond a period of four months. Lectures are a subordinate and subsidiary part of a medical education. The great object in view from them is to teach the student how to study for himself. The paper did not under-

value the importance of medical lectures—far from it. Information was communicated through these sources which would not be acquired any other way, but it was desirable that they should take their proper place in the education of students. It regarded the establishment of private Medical Schools in our cities as of very great importance.

A series of resolutions was appended to the report, upon which considerable discussion arose. The report of the committee was accepted and referred to the committee on publication, and the resolutions were brought separately before the Association in committee of the whole.

The following are the resolutions which were appended to this report :

1st. *Resolved*, That the attention of Medical Colleges be again directed to the resolutions of the Committee on Preliminary Education adopted by the Medical Convention of 1847, and that they be advised to require from students that they shall in all cases produce certificates of preliminary education. *Carried*.

2d. *Resolved*, That the several State and County Societies, as well as all voluntary Medical Associations throughout the country, be advised and requested to adopt the plan proposed by the Medical Society of the State of New York, at its last annual meeting, for ensuring due attention to the subject of preliminary education.

Dr. Davis, of New York, explained that the plan of the New York State Society was, that every County Society should appoint a board for preliminary examinations of students, with a view that they should be required to produce certificates from such boards before they could be received as medical students in the office of any private medical practitioner.

A gentleman, whose name we could not learn, offered the following as an amendment :

*Resolved*, That as students are generally introduced to the profession by private preceptors, it is recommended that no student be received by them unless they come up to the standard of preliminary education prescribed by this Association.

The question being upon the amendment, it was adopted by a large vote.

3d. *Resolved*, That this Association does not sanction or recognize "College clinics" as *substitutes* for Hospital clinical instruction, and that the Medical Colleges be again advised to insist, in all instances where it is practicable, on the regular attendance of their pupils during a period of at least six months upon the treatment of patients in a properly conducted Hospital or other suitable institution devoted to the reception and care of the sick.

The resolution was adopted.

4. *Resolved*, That it would conduce both to the convenience and



advantage of students, if the subjects taught in the Colleges were divided into two series; the one of which should be studied during the first year's attendance on lectures; and the other, during the second session. And that examinations should be substituted at the close of the first course of lectures on the subjects taught during that course, certificates of which should be required prior to the final examination. Rejected.

5. *Resolved*, That it is the deliberate opinion of this Association that the plan of examining students for medical degrees in private, and before one professor only at a time, is highly defective, and should be at once discontinued. Laid upon the table.

6. *Resolved*, That examinations for medical degrees should be practical, and that it is desirable as far as practicable that they should be conducted in writing as well as *viva voce*. Laid on the table.

7. *Resolved*, That in view of the importance of a due knowledge of practical pharmacy, the medical schools be advised to require from candidates for degrees that they should produce satisfactory evidence of their having been engaged in compounding medicines and putting up prescriptions, either under the direction of their private preceptors, or in the shop of a recognized and qualified apothecary. Laid upon the table.

In regard to examining boards and licenses:

8. *Resolved*, That the interests both of the public and the medical profession would be promoted by the establishment of boards of examiners in each of the States of the Union, to examine candidates for licenses to engage in the active practice of medicine and surgery. Laid upon the table by a vote of 69 to 54.

9. *Resolved*, That the standard of requirements established by the examining boards of the several states should be uniform, and that the examinations should, as far as practicable, be conducted in a similar manner. Laid upon the table.

10. *Resolved*, That the examiners should, in all instances, satisfy themselves that candidates are familiar with the elementary branches of general knowledge. Laid upon the table.

11. *Resolved*, That for the purpose of carrying out the objects contemplated in the foregoing resolutions, a special committee of seven members be appointed to prepare a memorial and form of law in reference to the subject of the establishment of boards of medical examiners to be submitted to the Association at its next annual meeting. Indefinitely postponed.

The committee of the whole having thus considered the resolutions submitted to them by the report on medical education, arose and reported to the Association, and their action was confirmed.

On motion of Dr. Stevens, of New York, it was voted, That the whole subject matter of medical education, together with the resolutions which have been passed, and those which have been laid upon

the table, be referred to a special committee of three members, with instructions to report to-morrow morning. The chair appointed Dr. Stevens, of New York, Dr. Wood, of Philadelphia, and Dr. Knight, of Connecticut, as the committee.

The following is the report of that committee :

1st. *Resolved*, That the Association reiterate their approval of the resolutions in reference to medical education, adopted by the Convention, which met in Philadelphia, in May, 1847, and contained in pages 73 and 74 of the published proceedings of that Convention.

2d. *Resolved*, That the attention of Medical Colleges be again directed to the Resolutions of the Committee on Preliminary Education, adopted by the Medical Convention of 1847, and that they be advised to require from their students that they shall, in all instances, present certificates of due preliminary acquirements prior to graduation.

3d. *Resolved*, That physicians, generally, throughout the Union, be advised and requested to require of those wishing to become their pupils, evidence of a proper general education, before admission into their offices.

4th. *Resolved*, That the Association does not sanction or recognise "College Clinics" as substitutes for Hospital clinical instruction, and that the Medical Colleges be again advised to insist, in all instances, where it is practicable, on the regular attendance of their pupils, during a period of six months, upon the treatment of patients in a properly conducted hospital, or other suitable institution, devoted to the reception and cure of the sick.

5th. *Resolved*, That in accordance with a resolution of the American Medical Association, adopted May 4th, 1847, "it is earnestly recommended to the physicians of those States in which State Medical Societies do not exist, that they take measures to organise them before the next meeting of this Association."

6th. *Resolved*, That the State Societies be recommended, after they shall have been organised, to recognise as regular practitioners none who have not obtained a degree in medicine, or a license from some regular medical body, obtained after due examination.

7th. *Resolved*, That the Association recommend to the various Schools of Medicine to meet at Cincinnati before the next annual meeting of this Association, and present a plan for elevating the standard of medical education to this Association.

The committee do not deem it expedient that the Association should now adopt, further than may have been done in the preceding resolutions, the recommendations offered in the several documents referred to them.

On motion of Dr. Harrison the report was accepted, and the Asso-



ciation went into Committee of the whole, Dr. R. D. Arnold in the chair, for the purpose of considering the resolutions attached to the report. These were taken up successively, and, after prolonged discussion; were reported to the Association without amendment, but with the addition of the following, proposed by Dr. T. E. Bond, Jr., of Maryland.

*Resolved*, That this Association recommend the encouragement of private medical institutions, strongly advising that Dispensary practice be made, as far as practicable, a part of the means of instruction.

The resolutions reported by the Committee of the whole were then adopted.

The annual report of the Committee on Hygiene, Dr. Jas. Wynne, of Baltimore, Chairman, was, in his absence, presented and read by Dr. Isaac Parrish, of Philadelphia.

Appended to this report were two able and interesting papers, one presented and read by Prof. S. Jackson, of Philadelphia, on the influence of tea and coffee used as food; and one by Dr. Josiah Curtis, on the Sanitary Condition of Massachusetts.

The report and the papers were accepted, and referred to the Committee on Publication.

The annual report of the Committee on Indigenous Botany was presented by the Chairman, Dr. N. S. Davis, of New York. The report (of which a verbal synopsis only was given) stated that our acquaintance with the medicinal properties of our indigenous plants was very slight and unsatisfactory. The committee, during the past year, had been making careful investigations, both by analysis and experiment, to discover the actual value and precise action of a number of substances admitted into the materia medica, concerning which the books gave no satisfactory account. As illustrative of this, he stated that of 1000 plants, reputed to possess medicinal virtues, but 150 are even slightly known. Of 280 native and naturalized plants mentioned in one of our best works on botany, we are told, concerning 150 of them, merely that they have been employed by the Indians for such and such purposes. This kind of information was not such as the present state of scientific accuracy demanded. Very little is known of the real virtues and uses of our native plants, but it is hoped that the investigations which have been commenced, under the auspices of the Association, will be continued and perfected.

The report was accepted and referred to the Committee on Publication.

The Committee appointed to consider the subjects presented by the report on Medical Literature, and the resolution of Dr. Wood, obtained permission to report *in part*, and submitted the following resolution.

*Resolved*, That a committee of three be appointed to memorialise Congress in favour of an international copy-right law.

This was so far amended as to require the proposed committee to prepare a memorial upon the subject, and submit it to the Association at its next annual meeting. The motion as amended was *adopted*, and Drs. G. B. Wood, T. E. Bond, I. Hays, were appointed as the committee.

The following preamble and resolution, presented by Dr. Evans, of Indiana, were adopted.

*Whereas*, Merit should be the test by which one individual is preferred to another; and, *whereas*, the places of profit and honour in our profession should be open to the competition of all, in order that the best selections may be made, therefore,

*Resolved*, That Trustees and others, exercising the office of appointing Professors in Medical Schools, be requested to adopt the system of *concours*, or public trials, among the means resorted to for calling out the talent of the profession, and ascertaining the qualifications of applicants.

Dr. G. B. Wood submitted the following preamble and resolution, which were adopted.

*Whereas*, A document prepared by the Medical Faculty of Harvard University, and appended to the Report of the Committee on Medical Education, contains an elaborate defence of the limitation of the courses of medical instruction in the schools to four months; and, *whereas*, this document has been referred, along with the Report of the Committee on Medical Education, to the Publishing Committee, and, if it be not mistaken by the public as a representation of the views of this Association, may, at least, have the effect of contravening those views, unless they be properly supported; therefore,

*Resolved*, That a committee be appointed to prepare, at leisure, a statement of the facts and arguments which may be adduced in favour of the prolongation of the courses to six months; and that the statement thus prepared be printed in the forthcoming volume of the



Transactions of the Association. Drs. S. Jackson, (Prof.); J. L. Atlee, and A. Stillé, were appointed the committee.\*

Dr. U. Parsons, from a Select Committee appointed at the meeting of 1848, made a report on the subject of adulterated and spurious drugs, and offered the following resolutions.

*Resolved*, That a committee, consisting of two delegates from each State here represented, be chosen by the President, to note all the facts that come to their knowledge with regard to the adulteration and sophistication of drugs, medicines, chemicals, &c., and to report them at the next annual meeting.

*Resolved*, That the President be requested to sign, and forward to the Philadelphia College of Pharmacy, a letter, stating that the Association are pleased to hear of its laudable intention to prepare and publish some simple directions for detecting adulterations in medicines, adapted to the understanding of the people generally, and would be highly

\* In a notice of the proceedings of this meeting of the Association, in the Boston Medical and Surgical Journal for May 16, the author remarks as follows, in relation to this resolution of Dr. Wood.

"It has been thought that this resolution, as it appears in the Transactions of the Association, will bear upon it the endorsement of the Association. It is obvious it will do this no more than will Dr. Ware's paper, which we have seen has been appended to the report on Education. They simply state the opinions of members of medical faculties in Pennsylvania and Massachusetts, and for which the Association is in no sense responsible."

The paper presented by Dr. Ware was prepared in answer to the queries of the Committee on Education, and delivered to them after the Association had met, and was permitted to be read in connection with their report. By an act of courtesy, this paper, which was in direct opposition to the published views of the Association, was admitted into the Transactions.

It was in order to counteract the opinion that might arise from seeing this paper in the published Transactions, that the Association had undone all that it had formerly decided upon in relation to the six months course, that Dr. Wood's resolution was offered, and a committee appointed to prepare a statement of facts and arguments in favour of the prolongation of the lecture term, to be published along with Dr. Ware's paper.

This committee, then, which was appointed *to sustain the views of the Association* in relation to a matter upon which it had already decided three times, *will*, most certainly, bear upon it the endorsement of the Association, so far as the expression of its opinions goes. All that it shall do, in the legitimate performance of its duties, will be by the authority of the Association, and cannot, therefore, be considered as a mere expression of the opinions of members of medical faculties in Pennsylvania.—Eds. Ex.

gratified could they welcome its appearance before the next annual meeting.

Dr. Ware submitted the following resolution, which was adopted.

*Resolved*, That the Committee on Practical Medicine be instructed to inquire into the expediency of adopting the English language exclusively in the writing of prescriptions, and in all directions for the composition and administration of medicines, and to report at the next annual meeting of the Association.

Dr. G. B. Wood, of Philadelphia, stated that he had a brief report to make, as a delegate from this Association to the British Association, and to the Provincial Medical and Surgical Association of England, the annual meetings of which he had attended in August last, in fulfilment of the objects of his appointment. Of the British Association he had only to say, that he was treated with all personal courtesy, and invited to participate in the proceedings of that body with the privileges of a member. By the Provincial Medical and Surgical Association he had been received with the most flattering distinction in his capacity as a delegate. The Association appeared to be much gratified by the compliment paid them, and expressed, through their President, their high appreciation of this Society, and their reciprocation of the sentiments conveyed to them; and passed a resolution, unanimously, requesting him (Dr. Wood) to convey their thanks to the American Association.

Dr. J. B. Johnson, of Missouri, introduced the following preamble and resolution, originally presented by him to the Medical Convention at Philadelphia, in 1847, and they were referred to the Committee on Medical Education.

*Whereas*, Numberless and important evils result from the almost universal practice of allowing persons, wholly ignorant of drugs and medicines, to engage as Apothecaries; and still greater, from the universal traffic in patent and secret remedies; therefore,

*Resolved*, That the Committee on Education inquire into the expediency of establishing a school or schools of Pharmacy in the respective States, for the special purpose of preparing persons for the business of Apothecaries; and also the expediency of adopting a rule, that no Physician ought to patronise a Druggist or Apothecary who deals in patent and secret medicines—and report at the next annual meeting of the Association.

Dr. James Wood, of Pennsylvania, presented the following resolution, which was *adopted*.



*Resolved*, That the Committee on Medical Science for 1849, be instructed to inquire into the expediency of establishing a Board to analyze the quack remedies and nostrums now palmed upon the public, and to publish the results of their examinations in a newspaper to be established for the purpose; and farther, to append such plain views and explanations thereto as will enlighten the public in regard to the nature and dangerous tendencies of such remedies.

Dr. Stevens, of New York, offered the following resolution.

*Resolved*, First, that a committee of seven be appointed to consider the subject of forensic medicine; second, a similar committee on indigenous botany and materia medica; and third, a committee on hygiene;—the committees to be nominated by the general Nominating Committee. Carried.

The Committee on Nominations reported the following Standing Committees to act for the ensuing year. *Adopted*. The list is as corrected by the Nominating Committee, after the vacancies created by resignation had been filled.

*Committee on Medical Science.*

Dr. Usher Parsons, Providence, R. I., Chairman.

Dr. J. Bigelow, Boston.	Dr. Jas. Moultrie, Charleston, S. C.
" J. B. S. Jackson, Boston.	" G. Emerson, Philadelphia.
" A. B. Malcolm, Dubuque, Iowa.	" D. King, Newport, R. I.

*Committee on Practical Medicine.*

Dr. J. K. Mitchell, Philadelphia, Chairman.

Dr. R. La Roche, Philadelphia.	Dr. B. R. Jones, New Orleans.
" F. West, Philadelphia.	" R. D. Arnold, Savannah.
" J. A. Swett, New York.	" ——— Smith, Indiana.

*Committee on Surgery.*

Dr. R. D. Mussey, Cincinnati, Chairman.

Dr. W. M. Awl, Columbus, Ohio.	Dr. L. A. Dugas, Augusta, Ga.
" A. B. Shipman, Syracuse, N.Y.	" S. Parkman, Boston.
" G. Fox, Philadelphia.	" J. R. Wood, New York.

*Committee on Obstetrics.*

Dr. T. G. Prioleau, Charleston, S. C., Chairman.

Dr. L. D. Ford, Augusta, Ga.	Dr. H. F. Askew, Wilmington, Del.
" Robert Lebby, Charleston, S. C.	" John Evans, Chicago, Ill.
" Josiah Bartlett, Stratton, N. H.	" Isaac Lincoln, Brunswick, Me.

*Committee on Medical Education.*

Dr. J. Roby, Baltimore, Md., Chairman.

- Dr. Blatchford, Troy, N. Y.      Dr. F. A. Ramsay, Knoxville, Tenn.  
 " G. M. C. Roberts, Baltimore.      " Geo. Sumner, Hartford, Conn.  
 " R. W. Sylvester, Norfolk, Va.      " W. F. Rockwell, Brattleboro, Vt.

*Committee on Medical Literature.*

Dr. Alfred Stillé, Philadelphia, Chairman.

- Dr. F. G. Smith, Philadelphia.      Dr. N. T. Morris, Montgomery, Ala.  
 " T. H. Yardley, Philadelphia.      " J. Fithian, Woodbury, N. J.  
 " P. C. Gaillard, Charleston, S. C.      " J. B. Johnson, St. Louis, Mo.

*Committee on Publication.*

Dr. I. Hays, Philadelphia, Chairman.

- Dr. A. Stillé, Philadelphia.      Dr. B. T. Barker, Norwich, Conn.  
 " H. J. Bowditch, Boston.      " Isaac Wood, New York.  
 " D. F. Condie, Philadelphia.      " M. J. Pittman, Rocky Mt., N. C.

*Committee on Forensic Medicine.*

Dr. A. H. Stevens, N. Y., Chairman.

- Dr. Luther V. Bell, Boston.      Dr. Robert Watts, New York.  
 " Pliny Earle, New York.      " R. S. Stewart, Baltimore.  
 " W. F. Rockwell, Vt.      " J. Knight, New Haven, Conn.

*Committee on Indigenous Botany and Materia Medica.*

Dr. Eli Ives, New Haven, Chairman.

- Dr. G. L. Corbin, Warwick Co. Va.      Dr. B. B. Lenoir, Roane Co. Tenn.  
 " H. R. Frost, Charleston, S. C.      " W. B. Cochran, Middleburg, Va.  
 " W. H. Davis, Baltimore.      " J. P. Harrison, Cincinnati.

*Committee on Hygiene.*

Dr. J. M. Smith, N. Y., Chairman.

- Dr. A. K. Gardener, New York.      Dr. A. S. Holmes, St. Louis, Mo.  
 " E. Jarvis, Dorchester, Mass.      " G. Emerson, Philadelphia.  
 " A. G. M. Cooke, Norfolk, Va.      " J. C. Simonds, New Orleans.

The committee recommended CINCINNATI as the next place of meeting, and the following as the Committee of Arrangements:—  
 Dr. Dodge, Dr. Judkins, Dr. Rives, Dr. Lawson, Dr. Richards and Dr. Strader, all of Cincinnati.

On motion a vote of thanks was presented to the Officers of the Association for the efficient and courteous manner in which they had



discharged their duties, and to the Committee of Arrangements for their kind and hospitable reception of the delegates. Dr. Z. B. Adams responded on behalf of the Committee of Arrangements; and, after receiving the congratulations of the President upon the happy termination of their labours, the Association adjourned on Friday evening, May 4th, *sine die*.

We have thus endeavoured to present to our readers a condensed account of the proceedings of the Association, derived from the various reports of the daily press, and from notes taken on the spot by one of the Editors.

To all engaged in it we are sure the meeting was a pleasurable one, and indicated a growing interest in the means proposed to elevate the standard of the profession. The number of delegates was very much larger, and the session protracted to a greater length, than on any previous occasion, and yet nothing occurred to mar the harmony of the meeting; a conciliatory spirit seemed to pervade the whole proceedings. The brief analysis of the Reports, given above, is but a feeble expression of their merits; we trust, however, at some future time, to do them more justice. The only regret experienced in relation to them was, in reference to their curtailment, on which we have already commented.

To the Physicians of Massachusetts in general, and to the Committee of Arrangements in particular, the thanks of the Association are most justly due for their great kindness and liberality. We are sure that no delegate can ever forget them.

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APPOINTMENTS.

Dr. H. J. Bigelow has been appointed Professor of Surgery in Harvard University in place of Dr. G. Hayward, resigned.

Dr. L. P. Yandell has been transferred from the chair of Chemistry, to fill the vacancy caused by the resignation of Dr. Caldwell, in the Medical department of the University of Louisville. The chair of chemistry has been filled by the election of Dr. Benjamin Silliman, Jr.

Dr. Elisha Bartlett has been elected to the chair of Pathology and Practice of Medicine, to fill the vacancy caused by the resignation of Dr. Drake in the same school.

## MEDICAL CLASSES 1848-9.

	No. of Students.	Graduates.
Harvard University,	126	
Albany Medical College,	101	
College of Physicians and Surgeons, New York,	176	39
Med. Department of the Univ. of the city of N. Y.,		134
University of Pennsylvania,	499	190
Jefferson Medical College,	477	188
Medical Department of Pennsylvania College,		36
Philadelphia College of Medicine,	91	21
University of Maryland,	190	64
Medical College of Georgia,	133	36
Med. Department of Transylvania College, Lex.	120	46
Medical Department of University of Louisville,	331	81
Medical College of Ohio, Cincinnati,	175	50
Rush Medical College, Chicago,	100	18
Medical Department of University of Missouri,	154	38
Starling Medical College, Ohio.	173	50

## PROGRESS OF THE CHOLERA.

From our exchanges we glean the following statistics of the progress of this disease:—

At New York the official report of Saturday says that no case had occurred within 48 hours. The Board of Health have taken possession of the third story of Monroe Hall, (a very large and airy room) corner of Pearl and Centre streets, and the patients remaining at the old Ball Court, fitted up as a temporary hospital, in Anthony street, were removed on Friday evening to it.

At Maysville on the 15th the Board of Health reported no case of cholera since the 12th, yet the papers give eight or ten cases for the twenty-four hours previous, but no deaths.

At Cincinnati, same date, the official report shows 25 cases and 3 deaths—on the previous day there were 46 cases from the 12th to the 14th, and seven deaths. Reports show that from Wednesday, May 2d, up to Tuesday noon, May 15th, there occurred 314 cases of cholera, and 71 deaths by this disease in Cincinnati.

The officers of the steamer America, which arrived at St. Louis on the 9th from New Orleans, report having hired twenty or twenty-one persons who died of the cholera during the trip. Several boats have arrived at various points on the Ohio, reporting one or two deaths each.

The St. Louis Republican, of the 9th, gives a weekly summary of the deaths in St. Louis—78 out of 130 from cholera.

In considering that the cholera morbus is still increasing, the Vicar



General of the Diocese of St. Louis grants a dispensation to the Catholics of this Diocese to make use of flesh meat on Fridays, and on all days of abstinence, until the cessation of the disease.

At Louisville, on the 14th inst., four new cases of the cholera were reported and one death—a negro. The disease is still confined to certain unhealthy localities, the city generally being healthy. The whole number of deaths there since the cholera commenced does not exceed thirty.

The Norfolk Board of Health have published a report, stating that nine cases of cholera morbus had occurred in that city within the last fifteen days, five of which had terminated fatally.

A few deaths have occurred on the steamboats that have arrived from below. The Lafayette had only one death from cholera—the person came on board sick; the Magnolia had also one death; the Niagara, from St. Louis, had one death; the Diadem, from St. Louis had two deaths. The second engineer of the Paris, from St. Louis, was dying when the boat left here, and the Colorado, from Nashville, had one death.

At Chicago, the first case of cholera appeared about the 2nd of this month, and from that time to the present, there have been twenty cases and twelve deaths.—*North American and U. S. Gazette, May 22.*

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## RECORD OF MEDICAL SCIENCE.

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### ANATOMY AND PHYSIOLOGY.

*On the Changes which take place in the Lungs after Division of the Pneumogastric Nerves.* By Dr. SCHIFF.—It is well known that after section of the vagus nerves in the neck of an animal, death frequently takes place at an interval of a few days. In these cases the lungs are found to have undergone alterations, characterised by congestion, and the effusion of a large quantity of frothy sanguinolent serum into the bronchi; which lesions have been ascribed by authors to the paralysis of the glottis consequent on the section of its nerve, (the recurrent,) which induces respiratory obstruction, either directly, or by permitting the passage of food and other matters into the trachea. Dr. Schiff has performed a variety of experiments which disprove these ideas. By cutting in some animals the recurrences, and in others the pulmonary branches of the vagus, he has convinced himself that the section of the latter causes congestion, with tumefaction of the bronchial mucous membrane; while that of the former only produces narrowing and paralysis of the glottis, without any pulmonary changes. The lesions of the lungs are likewise unaffected by the performance of tracheotomy, and by the section of the œsophagus in the neck (in dogs.) He there-

fore concludes, that the state of the lungs is dependent on the integrity of the pulmonary portion only of the nerve. Section of the nerve on one side produced a slighter amount of pulmonary lesion, but never confined to the lung of one side; a circumstance which M. Schiff accounts for by considering the anastomoses in the pulmonary plexus of nerves.—*Archiv. für Physiologische Heilkunde*.

[Dr. J. Reid considers the congestion and bronchial effusion as a secondary effect of the diminished frequency of respiration in animals in which the vagi are divided.—(Ed. Med. and Surg. Journal, April 1839.) 'This idea agrees perfectly with the results of the above experiments; and is, we doubt not, quite correct.}]—*Lond. Month. Jour.*

*On the Chemical Changes of Respiration.* By MM. REGNAULT and REISET.—A new and very extended series of experiments on this subject have been instituted by MM. Regnault and Reiset, who give minute details of the several steps of the process employed by them, the precautions taken, and the kind of apparatus used. Their investigations, which are still in progress, seemed to be performed with much care and exactness, and their results may probably be fully relied on. The most important of these results is, that nitrogen is invariably exhaled through the lungs, though the quantity is small, rarely exceeding one one-hundredth of the amount of oxygen consumed. Hydrogen, and certain carburetted gases, usually present themselves in small quantity. As an illustration of the changes which Regnault and Reiset found to occur in the respired air, the following results of an experiment, in which a young dog was confined in the apparatus for twenty-four hours and a half, may be quoted:—

	Grammes.
Oxygen consumed - - - - -	182.288
Carbonic acid produced - - - - -	185.961
Oxygen contained in the carbonic acid - - - - -	135.244
Nitrogen disengaged - - - - -	0.1820

If the quantity of oxygen consumed be represented at 100, then the results may be thus stated:—

Oxygen consumed - - - - -	100
Oxygen in the carbonic acid - - - - -	74.191
Oxygen otherwise disposed of - - - - -	25.809
Nitrogen disengaged - - - - -	0.0549
Average quantity of oxygen consumed in an hour - - - - -	7.44

These experiments rectify the erroneous results of Dulong and Despretz, who found that the quantity of nitrogen disengaged during respiration, was sometimes as great as one-fourth the quantity of oxygen absorbed.—*London Monthly Journal, from Comptes Rendus*.

*On the action of Chloroform on the Sensitive Plant (Mimosa Pudica).* By Professor MARCET, of Geneva.\*—When one or two drops of pure chloroform are placed on the top of the common petiole

\* Read before the *Société de Physique et d'Histoire Naturelle*, October 19, 1848, and communicated by the author.



of a leaf of the sensitive plant, this petiole is seen almost immediately to droop, and an instant after the folioles close successively, pair by pair, beginning with those which are situated at the extremity of each branch.\* At the end of one or two minutes, sometimes more, according as the plant is more or less sensitive, most of the leaves next to the chloroformed leaf, and situated beneath it on the same stalk, droop one after another, and their folioles contract, although generally in a less complete manner than those of the leaf placed in immediate contact with the chloroform. After a rather long time, varying according to the vigour of the plant, the leaves open again by degrees; but on trying to irritate them by the touch, it is seen that they have become nearly insensible to this kind of excitement, and no longer close as before. They thus remain as if torpid for some time, and generally do not recover their primitive sensitiveness till after some hours. If, however, when they are in this state of apparent torpidity, they are subjected again to the action of the chloroform, they close as they did the first time. It is not until they have been chloroformed several times, they lose all kind of sensitiveness, at least until the next day; sometimes they even fade completely at the end of too frequent repetitions of the experiment. In all cases the effects observed are more marked in proportion to the purity of the chloroform employed, and the degree of sensitiveness in the plant.

An analogous phenomenon is produced if, instead of placing the drop of chloroform on the base of the petiole, it is laid on the folioles situated at the extremity of a branch. The folioles of this branch immediately begin to close pair by pair, the common petiole droops, lastly the folioles of the other branches close in turn. At the end of two or three minutes, the nearest opposite leaf, and if the plant is vigorous, most of the leaves situated below on the same stalk, follow their example. When, after some time, the leaves open again, the same want of sensitiveness is manifested as in the preceding case.

A singular feature in this phenomenon is the manner in which the action of the chloroform is propagated from one branch to another, then from one leaf to another, even when the liquid disappears almost as soon as it is deposited. This action, as we have just seen, appears to be communicated from the leaf to the stalk, following in the latter a descending direction; generally the leaves situated beneath the chloroformed leaf are not at all affected. De Candolle, in making an analogous experiment on a sensitive plant with a drop of nitric, or sulphuric acid, remarked, on the contrary, that it was the leaves above the leaf touched which closed, without those situated beneath participating in this motion.† The observation of our learned countryman, is quite naturally explained by attributing to the ascending sap the transport of the corrosive poison, a transport which, in this case, would take place in the direction from below upwards. But how to account for the apparent

\* I previously convinced myself by experiment, that a drop of water, placed delicately on a leaf of the sensitive plant, caused no movement.

† De Candolle, *Physiologie Végétale*, vol. ii. p. 866.

transmission of the effects of the chloroform in the contrary direction, from above downwards? Might the descending sap more peculiarly have the effect of transmitting the narcotic effects of this singular compound from one part of the sensitive plant to the other; or might there exist in this plant some special organ susceptible of being affected by certain vegetable poisons in a manner analogous to the nervous system of animals? Notwithstanding the interesting investigations of Dutrochet and other physiologists, there still prevails too much obscurity on this subject to hazard an opinion. But in any case the fact is singular, and appears to me to merit the attention of persons accustomed to engage in questions of this nature.

Experiments of the same kind, made on the contractility of the sensitive plant with rectified ether, have furnished me with results nearly similar to the preceding; with this difference, however, that whilst one drop of chloroform placed on the common petiole of a leaf situated at the extremity of a branch of a sensitive plant, suffices to cause most of the other leaves, situated beneath, on the same branch to close; ether, in general, produced effect only on the leaf itself with which it is put in contact. The next leaves have generally appeared to me not affected. I must say, however, that my experiments with ether having been made after the others, and at a time of year when the sensitiveness of the plant already began to diminish, it is possible that the intensity of the effects produced may have thereby been affected.

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## CHEMISTRY.

*On the alleged production of Phosphate of Lime and Iron in the Egg during incubation.* By ALFRED S. TAYLOR, F. R. S.—In a work published some years since, Sir Gilbert Blane, while treating of the assimilative principle, says, that one of its properties is to reproduce, or actually create substances which are commonly regarded by chemists as simple or elementary. Among the illustrations which he brings forward in support of his statement are the following:—1. That the flesh and bones, for instance, of an ox, an animal subsisting on pure vegetable food; of a lion, an animal subsisting on pure animal food; and of a hog, an animal subsisting on mixed food; though differing in some of their sensible qualities, are identical when considered as chemical compounds. 2. He regards it as a curious and inexplicable question, how it happens that azote enters as much into the composition of the flesh of graminivorous and herbivorous animals, in whose food no azote is found, as it does into the flesh of carnivorous animals, in which this principle abounds. “There is none in the food of the former, and it appears, by experiment, that no azote (nitrogen) is absorbed from the respired air. Not only, therefore, is none abstracted from the air, but some must have been generated by the powers of life. 3. More carbon is daily eliminated in the process of human respiration in twenty-four hours than can have been supplied by the aliment, whether vegetable or animal. 4. Phos-



phorus is an essential constituent of bone : it is found in the urine, and abounds particularly in that of the horse, though there is little or none in his food. 5. The production of coral, madrepore, chalk, &c., consisting of the exuviae of shell-fish. It is impossible that this mass of matter could have preëxisted in the food of testaceous and crustaceous animals. 6. The bones of the chick far advanced in incubation contain phosphate of lime, although neither phosphorus nor lime is discoverable in those parts of the egg from which it must have derived its nutriment. Iron is found in a newly-hatched chick, though *none can be detected in an egg before incubation*. 7. There are large quantities of phosphate of lime found in the shells of crustaceous animals.

Such are the physiological and chemical grounds upon which the ingenious writer referred to, bases his argument in support of the view, that what are denominated elementary substances are created in the animal body under the influence of the vital principle. It is not my intention to affirm that all the substances known to chemists as simple bodies are insusceptible of being reproduced under some unknown conditions. It is not improbable that, as science advances, facts establishing this may be brought to light ; and it may hereafter become a subject of demonstration that some of these elements are compounds, and may thus be produced under the influence of the vital principle, or of electrical agency. In the meantime, however, it is right to examine carefully the postulates upon which an admission of this doctrine depends, and to see that we are not receiving mere figments of the mind in place of demonstrated truths. The greatest source of error in all inquiries concerning natural phenomena, is the tendency in the mind to generalize from a limited number of instances ; and this tendency may be traced to the fact, that it is far less troublesome to reason upon general notions than to make experiments.

Since the above views were propounded by Sir Gilbert Blane, a most extraordinary advance has been made in organic chemistry ; and what then appeared as incomprehensible difficulties, except upon the theory for the support of which they were adduced, are now, for the most part, easily susceptible of explanation. To the researches made by the German School of Chemists, the science is much indebted for the discovery of numerous important and interesting facts, which have established the existence of closely connecting links between the animal and vegetable kingdoms.

Thus the identity in the composition of muscle, whether taken from a carnivorous or herbivorous animal, offers no longer a difficulty to the chemical physiologist. Albumen, casein, and oil exist in the vegetable as well as in the animal tissue ; and the fibrine of the animal kingdom has its analogue in the gluten of the vegetable. It is not here necessary to consider whether the proportions of these principles in the two kinds of food be the same, or whether the principles themselves contain precisely the same amount of nitrogen, sulphur, or phosphorus, either free or under the form of phosphates ; nor is it necessary to admit the correctness of the hypothetical formulæ of Mulder and Liebig, in order to justify us in saying that this part of the argument for the reproductive

power of the so-called assimilative principle has been entirely overthrown by the discoveries of modern science. It is, therefore, now no longer curious or inexplicable that nitrogen should be a large constituent of muscle, or phosphorus of bone and urine, in vegetable feeders.

Although physiologists still differ concerning the source and quantity of carbon eliminated in respiration, there is no reason whatever to suppose that is formed within the body, or that its quantity is greater than that which would result from the detritus of the organs or the carbon of the aliment taken by the animal. Nor does the production of coral or madreporé in the bed of the ocean, or of pearl in the shell of the oyster, bear out the opinion for which this is adduced as one example of reproduction. Sea-water contains sufficient lime to allow of this material being converted by the work of polypi into submarine coral banks of enormous extent; and if we cannot fully explain the mode in which the chloride of calcium is thus brought to the state of carbonate of lime in the animal system, it is unnecessary to resort to the hypothesis that the material lime itself is created. It is also possible that phosphorus may exist in certain crustaceous fish; but is the introduction of this element, through the food of such fish, so excluded as to render it necessary to resort to the hypothesis of its production? It appears to me that it is not: and I would add, that, on examining the shells of the crustacea, ancient and modern, I have not detected any traces of phosphate of lime.

*Chemical Analysis of Animal and Vegetable Principles.*

*Gluten and Fibrine.*—Independently of elementary composition, there can be no doubt that these principles bear a close resemblance to each other in all their chemical relations. I have prepared gluten from flour by the usual process of washing, until it was no longer rendered purple or blue by water of iodine, and then have found that—

1. When boiled in pure and concentrated muriatic acid it became dissolved, forming a dark purple solution, and when this solution was added to a large quantity of water, the greater part of the gluten was again separated as a light-coloured precipitate.

2. When boiled with a solution of potash, containing, dissolved, a small quantity of oxide of lead, it acquired a dark brown colour, indicating the presence of sulphur.

3. When dried and heated, ammonia was abundantly evolved, indicating the presence of nitrogen.

4. It is soluble in caustic potash or soda, and in strong acetic acid.

In all these properties, vegetable gluten is not to be distinguished from animal fibrine.

*Vegetable and Animal Albumen and Casein.*—It is well known that the albumen of the egg, when boiled with pure and concentrated muriatic acid, acquires a rich pink, red, or purple colour. I have found the same effect to follow with the substance of the cocoa-nut, the hard kernel of the date, the almond, and other seeds, and also with the transparent and opaque part of feathers, as well as with horn and the human nail. Animal albumen, whether as feather, nail, or horn, produces, with potash and oxide of lead, a large quantity of sulphuret. Precisely the



same result is obtained with the cocoa-nut, almond, and other vegetable seeds. The casein of the vegetable kingdom, as it is obtained from pease, possesses all the chemical properties of that derived from milk. There is the same amount of sulphur and nitrogen.

These facts, then, as well as the results of elementary analysis, without resorting to the hypothesis of Mulder—that all these principles are but modifications of one original substance, protein—leave it undoubted that the differences between animal and vegetable food in their constituent principles are more physical than chemical: and that in the vegetable kingdom are found all those simple substances which a few years ago were supposed to be produced by the animal organism. To Liebig is due the merit of having called especial attention to these facts. I have so far verified his statements by experiments, in order to show that the hypothesis of the production of sulphur, phosphorus, nitrogen, and carbon in the body is unsound. The chemical facts admit of another and more reasonable explanation.

The statement which appears most strongly to favour the argument for the production of elementary substances under the influence of the vital principle, is that which relates to the alleged formation of phosphate of lime and iron in the egg during incubation. If this view were correct, it would leave the question settled in the affirmative; for it is impossible to conceive that iron should traverse the pores of the shell during incubation, in order to become fixed in the body of the chick. Such an hypothesis would present even greater difficulties than that of its supposed formation.

I therefore resolved to put this question to the test of experiment, and a favourable opportunity having occurred, the following results were obtained. The albumen of the yolk of the egg is well known to be identical with that of the white. The yolk contains a yellow oil, separable by alcohol or ether, and according to Liebig, cholesterine and iron. It is stated in some of our best works on chemistry that iron is contained in the yolk at all periods, and it is implied that it is absent from the white.

1. Two eggs were boiled for some minutes to coagulate the albumen, and the whites and yolks were then carefully separated and thoroughly dried. Each mass was then separately incinerated in a clean platina crucible, and the ash digested in pure muriatic acid (free from iron) carefully distilled for the purpose, and diluted with a small quantity of water. The liquid was filtered, and tested with the ferro-cyanide of potassium and sulpho-cyanide of potassium. A precipitate of prussian blue was obtained with the former, and the deep red colour, indicative of a persalt of iron, was the result of the addition of the latter. The same effects were produced in acting upon the ash in both cases; whence it was inferred that iron was not only present in the white of egg, but its quantity appeared to be as nearly as possible the same as that which existed in the yolk.

2. In this experiment a perfectly fresh-laid egg was taken. It was boiled for some minutes to perfect coagulation, and the shell was carefully separated from the adhering membranes.

*The Shell.*—This was dissolved in diluted muriatic acid: there was copious effervescence, and some animal matter was set free during the process of solution. The muriatic acid was so adjusted as not to be more than sufficient to dissolve the earthy basis. On adding ammonia there was a very faint milky precipitate; and on adding phosphate of ammonia and ammonia there was a slight gelatinous precipitate, which did not disappear entirely on supersaturating with muriate of ammonia; and lastly, on adding the ferro-cyanide and sulpho-cyanide of potassium there was no change. From these results I infer that the shell consisted of animal matter, of carbonate of lime in large proportion, faint traces of phosphate of lime, and probably of magnesia, but no portion of iron.

The yolk and white, including the membranes, were then dried and incinerated; the ash digested, as in the before-mentioned experiment, in pure muriatic acid diluted with water; and this solution after filtration, was tested—1st, by ammonia, which threw down a very copious gelatinous precipitate of phosphate of lime; 2dly, by the ferro-cyanide of potassium, which produced a perceptible quantity of prussian blue; and 3dly, by sulpho-cyanide of potassium, which produced the deep red colour of the sulpho-cyanide of iron. These results were compared with the action of the tests separately upon the muriatic acid employed, in order to ensure the purity of the solution used; and the differences were such as to lead clearly to the inference that *iron and phosphate of lime are large constituents of the recently-laid egg.*

3. For this experiment I procured an egg which had reached the twenty-second day of incubation. The shell had been broken in the usual situation, but the chicken, which was perfectly developed, was dead. The shell, with the chicken contained in it, was in the first instance dried by a gentle heat. The shell was entirely separated, and the only difference between this and the recent shell was, that it was much more brittle, and more easily reduced to a fine powder. It was dissolved in diluted muriatic acid, and the results obtained by applying tests to the solution were the same as those described under 2. It was impossible to perceive any chemical difference between the recent and the incubated shell.

The chicken being divided into fragments, and the yolk contained in its abdomen thoroughly dried, the whole mass was incinerated in a platina crucible, and the ash digested, as in 2, in diluted muriatic acid. The same tests were applied, with results so perfectly similar as to render it impossible for an indifferent person to say which was the ash of the recent, and which of the incubated egg. The research was directed chiefly to the presence of iron and phosphate of lime; and both of these bodies were present, but not in greater quantity than had been found to exist in the recent egg. A direct quantitative analysis was not performed, but the circumstances in the two cases were made as nearly as possible the same, by taking equal quantities of solutions in the same acid liquid, and using like quantities of the tests. After all, the proportions of iron and phosphate of lime contained in the egg, whether recent or old, are small, and the principal object of the inquiry was



rather to determine whether iron and phosphate of lime were or were not constituents of the recent egg.

From these experiments and observations I would therefore draw the following conclusions:—

1. That the chemical composition of vegetable food is such as readily to account for the introduction of carbon, phosphorus, sulphur, and nitrogen into the animal system, and to render it unnecessary to assume that these elementary principles are products of the animal organism.

2. That the fluid parts of the egg contain iron and phosphate of lime in some unknown state of combination at all periods.

3. That iron and phosphate of lime are contained in the freshly-laid egg, as well as in that which has undergone the process of incubation; and that from the application of tests in quantitative analysis, there is no reason to believe that the proportions of these two bodies are greater at one time than at another.

4. That iron is contained in the albumen as well as in the yolk of the egg, and probably in equal proportion.

5. That the shell of the egg contains no iron, and but very slight traces of phosphate of lime.

The illustrious Boerhaave, writing in 1727, says, in reference to this subject: "All the parts of a chick, as the blood, flesh, bones, &c., are formed out of the bare white of the egg (albumen); for nothing but this is consumed during the time of the incubation of the hen, the yolk all the while remaining entire." Liebig, writing in 1842, says: "Yet we see in the process of incubation, during which no food and no foreign matter, except the oxygen of the air, is introduced or can take part in the development of the animal, that out of the albumen,—feathers, claws, globules of the blood, fibrine, membrane and cellular tissue, arteries and veins, are produced." It will thus be seen that a century has added but little to our knowledge of this subject; for Boerhaave has arrived at the same conclusion to which a more correct analysis has led modern chemists. That the albumen or white is principally concerned in these singular changes is proved by the fact that the greater part of the yolk is found entire within the body of the chick towards the last stage of incubation. We have, then, during this process, under the influence of a vital principle, no creation of elementary matter in the egg; but a most marvellous instance of the re-arrangement of the principles which it contains in new physical forms; the conversion of soluble into insoluble albumen, under the form of feathers, claws, and cellular membrane, with the concentration of the phosphate of lime in bone, and of the iron in the blood.—*Guy's Hospital Reports.*

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## PATHOLOGY AND PRACTICE OF MEDICINE.

*On Sanguineous Perspiration.* By Dr. SCHNEIDER.—It has often been a question whether, under any circumstances, blood is ever mixed with the fluid of perspiration in human beings. Dr. Schneider remarks that he has several times observed the phenomenon. He mentions hav-

ing been once summoned to a healthy man, 50 years of age, who, for a period of 12 hours in succession, had travelled on foot; during the journey he had perspired much in his feet; and, on examining them at the end of it, they were found covered as high as the ankles with a sanguineous perspiration, which had also soaked into and stained his stockings. In another case of a healthy young man, Dr. S. mentions having noticed that, after violent exercise, the perspiration beneath the arms was of a bright red colour; and he quotes a similar case from Huffman.

In proof that the perspiration over the whole body may also be of a sanguineous character, he mentions one case in which it had been observed in a delicate man after copulation, and then quotes the following still more remarkable case from Paulini. While surgeon on board a vessel, a violent storm arose, and threatened immediate destruction to all. One of the sailors, a healthy Dane, 30 years of age, of fair complexion and light hair, was so terrified that he fell speechless on the deck. On going to him Paulini observed large drops of perspiration of a bright red colour on his face. At first he imagined the blood came from the nose, or that the man had injured himself by falling; but, on wiping off the red drops from the face, he was astonished to see fresh ones start up in their place. This coloured perspiration oozed out from different parts of the forehead, cheeks, and chin; but it was not confined to these parts, for, on opening his dress, he found it formed on the neck and chest. On wiping and carefully examining the skin, he distinctly observed the red fluid exuding from the orifices of the sudoriparous ducts. So deeply stained was the fluid, that on taking hold of the handkerchief with which it was wiped off, the fingers were made quite bloody. As the bloody perspiration ceased, the man's speech returned; and when the storm had passed over he recovered, and remained quite well during the rest of the voyage.—*Lond. Med. Gaz. from Casper's Wochenschrift.*

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*Ossification of the Arachnoid.*—At the Pathological Society of London, Dr. Brinton exhibited a specimen of ossification of the arachnoid, taken from a patient who had died of some general disease, no suspicion of any affection of the meninges having been entertained during life.

It consisted of very numerous and small plates of ossific matter, lying immediately beneath the visceral layer of arachnoid. Their outer surface was smooth and covered by the serous membrane. Their inner surface rough and minutely mammillated; their little projections just visible with the naked eye, looking towards and into the sub-arachnoid space. The size of the plates varied, on an average, about one-eighth to one-fourth of an inch.

The microscope shewed them to consist of numerous conical processes, projecting from a flat stratum of bone. Rarely their shape was fungiform. Their several appearances somewhat resembled the pharyngeal teeth of some snails. In structure they consisted of canaliculi and lacunæ, without Haversian canals.—*Ibid.*



*On the existence of Free Carbon in the Human Body.* By JAMES PAXTON, M. D., of Rugby.—For some time past I have been occupied in collecting and arranging pathological evidence relating to the modes of production, the forms of retention, and the remarkable extrication of uncombined carbon in various parts of the human body. There are not wanting instances of the deposition of free carbon very manifest during life, but it is more frequently observed in post-mortem inspections, and more especially invading the pulmonary tissue. The fruits of these investigations I have much pleasure in placing before this meeting of the Association.

It is a curious fact, that the only elementary substance as yet detected in organized bodies, chemically uncombined, is carbon.—There is no part of the animal system in which it is so frequently met with as in the bronchial glands. The true cause of their blackness, I believe, was first demonstrated by Dr. Pearson.

Whenever there are pulmonary lesions of a lengthened duration, or any mechanical interruptions to the respiratory functions, these glands become the repositories of carbon; the effect of which is to produce a degree of enlargement and induration. I have a specimen of carbonaceous bronchial gland enormously increased in its dimensions, and of an almost scirrhus density, with the pneumogastric nerve adherent to it. It is not unfrequently the case that the bronchial glands are so loaded with carbon that they are of an uniform inky colour. The extent of black discolouration bears some relation to the age of the person, to the state of the lung, and to the nature of the air breathed, particularly to the quantity of carbon it contained. The bronchial glands are always proportionably larger and blacker in those who are affected by chronic disease of the lungs. In persons advanced in life there is a disposition to carbonaceous retentions, more especially in the lungs; it indicates the period of senile atrophy at which they have arrived. A certain amount of black lines in the interlobular tissues, a gray or black web in the interior, occupying a greater or less space, with specks of various dimensions and granules of the same appearance, constantly characterize the lungs of the aged. A chemical analysis by Guillot has proved this black matter to be exclusively carbon in an exceedingly minute state of division. When this carbonaceous matter is blended together with the animal fluids it becomes a pigmentum nigrum, corresponding to the secretion of the choroid membrane, and to the ink of the cuttlefish. The colouring matter of all these substances is animal charcoal, identical with the animal charcoal artificially produced in its indestructible properties, and remarkable in its resistance to the action of the strongest nitric and hydrochloric acids or the caustic alkalies.

Here I wish to be understood that the carbon of the lungs in the aged is not always derived from the inspiration of impure air, but that it appears frequently, at least, to depend on insufficient combustion.

Chronic pneumonia, whether simple or accompanied by tuberculous accretions, as a consequent affection, occasions accumulations of carbon, which are unequally insinuated in the pulmonary textures. It may be collected in large black masses, or it may be scattered in smaller iso-

lated spots ; at other times we find the black spots irregularly arranged in clusters. From such specimens we shall be able to form some tolerable conception of the results of chronic inflammation in the production of carbonaceous deposits. Hence vascular congestion has encroached on the air-vessels, and obliterated much of the areolæ, with even the ultimate ramifications of the bronchi. The air and blood are now no longer in contact, the extrication of carbonic acid ceases, and free carbon is detained in the lungs. We often observe large cavities at the apex lined by a carbonaceous pigment. During life these cavities communicated with the bronchi, therefore with the attendant cough was gray expectoration proceeding from a mixture of this substance with the mucous and suppurative secretions.

Tuberculosis or true phthisis pulmonalis, as it advances to a fatal issue, destroys the vesicular and tubular structures, consequently the aerial spaces become more and more limited, and in proportion to the extension of the disease, the chemical changes required in respiration are equally limited. If the disease is protracted, similar depositions, from the causes just mentioned, take place ; sometimes we perceive them centrally in the tubercle, but usually the carbonaceous depositions circumscribe the tubercle. The effect of such black infiltration is induration of the part, with shrinking and corrugations. There are, however, cases of carbonaceous lungs in which there is no obvious alteration in form, the carbon being simply diffused through a congestive organization.

It is not my intention to review every known phenomenon relating to the retention of carbon, but merely to glance at the fact of its being found in various parts of the animal system. We feel little surprise at the discovery of carbon in the organ destined to decarbonize the blood ; but we are rather astonished at its appearance in the organs remote from the lungs. I wish especially to draw attention to the consequences of carbonaceous affections of the lungs, particularly as there is a vague notion referred to by Hasse, that black deposit (denominated pseudomelanism), is not only innoxious, but actually opposes a barrier to the encroachments of tubercles, and is "the almost unfailing concomitant of reparation of pulmonary disease." Another admirable pathologist has asserted "black pulmonary matter to be altogether compatible with perfect health." Such views, however, are unsupported by the cases I have examined. On the contrary, I regard melanotic stains as marking a stage of degeneration, in which the vascular and aerial apparatus is most seriously involved. So far as uncombined carbon invades the lungs, in the same proportion are the circulation and the respiration impeded. We may, therefore, consider productions of black matter as no other than an unmixed evil. When added to tubercular mischief, it only increases the obstacles to the maintenance of the vital and chemical functions of the lungs, by farther abridging the areolar surface, and by obstructing the escape of certain normal and abnormal secretions which might happen to be the attendants on the carbonaceous diathesis.

To what cause are such retentions of carbon to be attributed ? Brockman thought it "an effort of nature to relieve the circulation of a sur-



charge of carbon." Hensinger, I imagine, approaches nearly to the correct theory : namely, a deficient elimination of carbon, and particularly of carbonic acid, assigning this reason for the opinion, "carbon being principally found in organs which ought to be the natural outlet of this element."

In the cases I have studied, the retention of carbon arose under the following circumstances :—1st. During the reduction of animal power by lengthened years, when the pulmonary organs seem unequal to the task of expelling carbonic acid. 2d. Where the existence of disease prevents both the reception of oxygen and the escape of carbon from the lungs. 3d. Where the individual lived in a situation in which we might suppose there was insufficient oxygen in the atmosphere he breathed. It is not unreasonable to assume that every one of these causes, or a combination of them, may be sufficient to account for the retention of carbon in its passage through the vessels.

The next class of cases to which I shall advert are those in which carbonic acid, under certain morbid conditions, is decomposed on the surface, the carbon uncombined remaining on the skin. The extrication of carbon by perspiration is easily demonstrated by the colour of the linen when worn for too long a time. Free Carbon is also deposited on the epidermes of old persons, particularly under the nails, and "where free access of oxygen is impeded ; for example, in the axilla, in the soles of the feet."

The most extraordinary instance of the production of carbon I have ever witnessed is that of a young lady, who having been in ill health for some years, from an affection of the heart, has now exudations of pure carbon on the skin round the orbits and about the mouth. It is washed off in the morning, but it reappears in the evening. When wiped away with a napkin, we are immediately struck by the black sooty appearance. In a word, this exudation has all the properties of the smoke collected from the flame of a lamp.

A similar case is recorded in the *Medico-Chirurgical Transactions*, of transpiration of carbon from the forehead. There is, therefore, competent authority for asserting that vital chemistry is capable of reducing one of the component parts of the body to its original element.

The series of cases just mentioned are entirely to be ascribed to an internal origin ; the remote cause is organic, but the immediate cause is chemical, and constitutes a train of features attendant on the diversified diseases which interfere with the economy of respiration.

The last series of carbonaceous affections which I shall have occasion to notice are those in which the introduction of carbon into the lungs is from external and incidental causes. I allude to the inhalation and absorption of molecules of carbon suspended in the air in the form of smoke. In manufacturing towns, the ordinary carbonaceous lung is very common. The Professor of Medicine in Queen's College, Birmingham, has "never examined the body of an artizan, who was exposed by his occupation to the respiring of an atmosphere containing carbonaceous matter, without finding his lungs more or less blackened by it." The effect of this during life is to interpose mechanical impe-

diments to the functions of the lungs, in addition to the irritation excited by the presence of extraneous matter.

One species of this series of carbonaceous lung is peculiar to those who labour in coal mines. There is a specimen in the collection of the Royal Medical Society of Edinburgh, showing the miserable condition of lung to which coal miner's are liable. There may be seen some fine jet black lungs in the Museum of the College of Surgeons in the same city. Just imagine the lungs carved out of a piece of coal, and you have a perfect idea of these specimens. I have in my possession a portion of miner's lung, beautifully spotted, given to me by Dr. Peacock. In describing the colour, it would be obvious to any one who would do me the favour to inspect it, that I have not exaggerated the description when I say that the whole of the pulmonary tissue is penetrated by minute atoms of carbon. Dr. Ayres did me the favor to examine it, and assures me that it contains a large portion of carbonaceous matter.

Perhaps there has been enough produced to prove that great damage is sustained by the pneumonic system, when, from whatever cause, carbonic acid is decomposed instead of being thrown off by expiration and the secretions. We ought to be no longer under the erroneous impression that the retention of uncombined carbon has any other than ill consequences. I have also endeavored to exhibit the equally injurious effects of breathing an atmosphere impregnated with smoke or coal-dust. To follow up the inquiry and to multiply instances would not be difficult, but does not fall within the compass of the present communication. The latter division of my subject is still under the deliberation of the government, and it is a subject on which all ranks would do well to reflect. If, in addition to much that has been lately published on these subjects, I have brought before you some direct evidence of the nature and consequences of carbonaceous affections, I have obtained my object. Philanthropists and philosophers have pointed out preventives if not remedies.

In the pathological division of the Museum of the College of Surgeons, in London, the preparations numbered 1,462, 1,477, 1,648, 1,798 A, may be referred to as fine specimens of several states of the lungs here described.—*Trans. of the Prov. Med. and Surg. Assoc.*

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## SURGERY.

*On Strangulated Hernia, and the use of Chloroform for its Reduction.* By M. MICHEL GUYTON.—The author, after stating the usual causes of strangulation, points out that the distension by gas is one of the most frequent causes of irreducibility. Irreducibility, in consequence of an accumulation of gas, is the first symptom of strangulated hernia. It is simply a gaseous tumour, which, from purely mechanical laws, comes to be tightly impacted in an opening through which it has passed; but soon the vitality of its coats comes into play, and inflammation and other secondary lesions are the natural and inevitable consequences, and these are what give hernia its dangerous and justly for-



midable characters. At first, reduction by ordinary taxis is possible, and generally will be easily accomplished; it depends on the force of contraction in the abdominal muscles, the degree of distension of the hernia, and, above all, on the width of the opening of communication. If one cannot always reduce it, it is owing to the difficulty of exercising on the intestine a pressure sufficient to counterbalance that of the whole abdomen: that is to say, because our force is employed upon a small extent of surface, and one difficult to compress. With chloroform, one has not to combat muscular action, the gases are quickly dispersed, and the intestinal walls collapse and readily re-enter. Further, distension of strangulated hernia by gas, permanent and involuntary contraction of the abdomen, constitute the two principal elements of strangulation; pain is only secondary—its importance lies entirely in its results, namely, the muscular contraction. Chloroform acts only on this contraction and on pain; the rings remain in the same condition—they cannot be slackened either by abolition of muscular force, which has no effect on them, nor yet by direct relaxation. Chloroform, in destroying the true and principal cause of strangulation, namely, contraction, destroys also its results: the hernia empties itself, and is reduced. It follows, therefore, that chloroform is most called for in hernia composed entirely of intestine; and that the reduction of compound hernia is more difficult than that of simple enterocele, nay even at times impossible. Chloroform might be useful in those cases of epiplocele, and enteropliplocele where omentum predominates, by abolishing the pain produced by the various manœuvres, and that involuntary and powerful contraction of the muscles by which every organ in the abdomen has a tendency to escape. But it is no longer so direct in its influence; the omentum forms without the ring a hard solid tumour, incapable of being reduced suddenly by pressure, and, if its diameter is very much disproportioned to that of the opening, its return is quite impossible.—*London Monthly Journal from L'Union Med.*

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*Bad Effects sometimes arising from Taxis in Hernia.*—In speaking of the taxis, Mr. Gay says, "It is difficult, and even impossible, to obtain any data upon which to calculate the proportion in the total number of deaths after strangulation, which is due to the operation of the manual attempts made to relieve it; or what share these efforts have in the production of the post-mortem appearances in persons in whom the stricture has been relieved by the knife. From the general condemnation of the taxis, almost to proscription, there is every reason to apprehend that much of the fatality in hernia is to be ascribed to it."

Arnaud recites a case in which the taxis was succeeded by suppuration of the omentum. Petit says, "Combien de fois a-t-on vu périr des malades le même jour que la réduction leur a été faite? à l'ouverture des cadavres, on a trouvé aux uns le boyau gangréneux, aux autres il étoit crevé, et les matières fécales repandues dans le ventre." Other instances are cited by Morand, Bell, Sir. A. Cooper, South, Teale, and others; and it would appear from these that the pathological indications of injury from taxis are peritonitis, gangrene, and rupture of the intes-

tine. "It has fallen to my lot," Mr. Key states, "to see more than one case in which the patient has fallen a victim to a long and continued succession of violent attempts with the taxis. These are followed by a discharge of blood per anum from the bruised vessels of the lining membrane of the gut, which frequently exhausts the patient after the hernia has been returned."

Mr. King has given a tabular view, from unpublished records, of thirty-eight fatal cases of hernia, to illustrate the causes of death, &c.; from which I make the following extract as it relates to the effects of taxis:—

In one the hernia was reduced by taxis; death by peritonitis; gut red.

In one the hernia was reduced by taxis; recovering.

In one the hernia was reduced by taxis, sac and all; the stricture remaining.

In six the hernia was reduced by taxis, but ruptured; death by peritonitis.

Mr. King deduces that nearly one-fourth of the deaths by hernia follow the simple taxis. In one of these cases a reduction "en bloc" was effected by the taxis; and in another, it "was the same thing but for the operation." One patient died from rupture of the bowel, whilst in the other cases death seems to have resulted from peritonitis. The rude employment of the taxis *during an operation*, is, I believe, not unfrequently the cause of death. I have seen an instance of this kind; and am led to think that when the return of the bowel is not promoted by the division of the presumed seat of stricture, and the obstacles are not clear to the operator's mind, the return of the bowel by violence is often preferred to an abandonment of the operation. But in order to rescue the taxis from the opprobrium which its abuse has cast upon it, and to illustrate the advantages which accrue from its judicious employment, I have taken the liberty to construct the following table from Mr. Poland's report of the cases which were treated in Guy's Hospital during the years 1841-42:—We learn from this table, which is too large for insertion, that of 19 cases of hernia, 12 scrotal, 6 femoral, and 10 ventral, only one, a scrotal case, after strangulation had lasted twelve hours, terminated fatally. This table is an abundant plea for its employment, where there are no symptoms of inflammation or other circumstances to interdict it. The question, however, occurs in reference to the taxis, as on a former occasion in reference to delay—why, after the oft-repeated cautions against the contrary mode of its employment, is its use not more constantly limited to the most gentle, and always more successful, kind of pressure?—*Ibid from Gay on Femoral Hernia.*

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*Case of Tetanus cured by Etherization.* By M. CAIGNIET.—An infant, fourteen days old, presented the following symptoms of the disease; the jaws fixed, and visible contraction of the muscles of the face; the eyelids open and the eye immovable; the pupil a little dilated; and the lips covered with foam. The head was drawn forcibly backwards; the upper extremities were stiff, and the fingers bent; the muscles of



the chest and abdomen participated in this convulsive movement, and the inferior extremities were so rigid as to permit of the infant being held by them in a horizontal position. The respiration was hurried, and the pulse small and frequent. From these symptoms M. C. considered the case to be one of tetanus, which in the absence of any external injury, he attributed to the influence of cold and moisture. He had recourse to etherization, and insensibility having been produced, the state of rigidity disappeared, the respiration became easier, and the pulse fell twenty-four beats in the minute. New fits came on, and were combatted by the same means. In twelve days the disease had altogether disappeared, but had left the child in a state of great debility. *Ibid* from *Bulletin de L'Academie Royale de Medecine de Belgique*.

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*On Arterial Compression in Inflammation of the Extremities.* By DR. FRANCOIS HENROZ.—Dr. Henroz suggests the employment of arterial compression in the treatment of the different inflammatory affections, both of the superior and inferior extremities.

He himself has only made use of it in two cases of paronychia, in which it gave complete and instantaneous relief from pain, and in a short time caused resolution of the inflammation. In severe cases, the pressure ought to be applied either upon the humeral artery, or upon both the arteries of the fore-arm; but in general, pressure upon the radial, when the thumb, or index, or middle finger is affected; or of the cubital, when the ring or little finger is the seat of the disease, will be found sufficient. The apparatus which he employs is exceedingly simple; it consists merely of two small wooden splints, somewhat longer than the diameter of the limb at the part to be compressed. A small compress having been placed over the artery, one of the splints is applied upon it, and the other opposite to it, and their ends are tied together beyond the limb on either side. The amount of pressure can thus be easily regulated.

In one of the cases in which he employed this treatment, the disease had been going on for eight days before the patient was seen by him. All the fingers were affected, and the whole of the hand and lower part of the fore-arm were very much inflamed, but no fluctuation could be detected. The axillary glands had become swollen and painful, and there was general feverish reaction. Pressure with the hand over the humeral artery immediately caused a cessation of the pain. The apparatus was applied so as to compress both the arteries of the fore-arm above the wrist, and no bad effects were experienced, notwithstanding the inflamed state of the parts.

The splints were directed to be removed for a short time every three or four hours. No pain was felt as long as the pressure was continued, but when it was removed the pain returned. Next morning the constitutional disturbance had quite subsided, the swelling and heat of the hand were much diminished: and after the pressure had been continued

about thirty hours, all the symptoms of inflammation had disappeared. *Bulletin de l'Academie Royale de Médecine de Belgique.*

[It seems doubtful how far the relief from pain obtained in those cases was the result of compression of the arteries, and not rather of pressure upon the nerves, as we know that the phenomenon of pain generally precedes the increased flow of blood to an inflamed part. It seems also very doubtful whether compression may not sometimes produce such effects as shall render its use improper. Nevertheless, we have been induced to give this abstract of M. Henroz's memoir, from the belief that the subject merits further investigation.—*London Monthly Journal.*]

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*Case of Calculus in the Bladder—Death from Exhaustion.* By W. H. VAN BUREN, M. D.—Dr. Van Buren related the particulars of the case of an old gentleman, of 72, who was attacked, five years ago, with retention of urine, of which he had frequent repetitions. He labored under calculus, which gave no trouble and of which no rational signs except frequent micturition existed. Finally, he had an attack of vomiting for 72 hours in succession, which nothing allayed, and he gradually sunk and died from serous effusion into the brain, with diseased heart and exhaustion.

The omentum adhered to the ileum and ascending colon. Recent grumous blood and pus escaped on raising it. The appendix vermiformis was ulcerated at three different points, and attached to the ileum. In the colon, two inches from the valve, was an ulcer three-fourths of an inch in diameter, and a smaller one within it. Old false membrane on the inner surface of the colon. The mucous membrane of the bladder thickened. All the lobes of the prostate immensely enlarged. The peritoneal covering of the bladder very fat. A sacculus behind third lobe. Something very hard felt in third lobe of prostate. The prostate, posterior of the urethra, was not diminished in calibre. The ureter was very much dilated and the inferior infundibula very much enlarged. Pelvis of kidneys not. Substance of the kidneys partially absorbed.—*New York Journal of Medicine.*